

GRAIN & FEED JOURNALS CONSOLIDATED

A Merger of Grain Dealers Journal, American Elevator & Grain Trade, Grain World and Price Current-Grain Reporter

In This Number

The Encouraging Reduction of Fire Hazards

Why Mixed Shipments Are Discounted

Tail to Wag the Rye Dog

The Elevator Owners Responsibility

Buyer Charged with Knowledge of Chattel Mortgage

Freight Charges on Reconsigned Shipment

Eulogy of a Country Grain Merchant

The Abnormal Granary

Lubricating Motors

Selling Grain Covered by Prior Liens

Trucks in the Pacific Northwest

Protection Against Poison Gas in Grain Bins

Hay Drying Is Surveyed

Soybeans Have a Future

Feedstuffs Definitions Accepted by Feed Officials

Feed Men Discuss Trade Practices and Credit

Turkey Flavors



Concrete Storage Elevator at Odessa, Russia.
[For description see page 443]

Directory of the Grain Trade

In Organized Markets Only Members of the Local Grain Exchange Will Be Listed

HAVING YOUR name in this directory will introduce you to many old and new firms during the year, whom you do not know or could not meet in any other way. Many new concerns are looking for connections, seeking an outlet or an inlet, possibly in your territory. It is certain that they turn to this recognized Directory, and act upon the suggestions it gives them. The cost is only \$10 per year.

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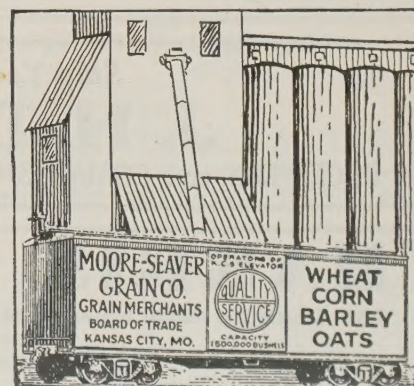
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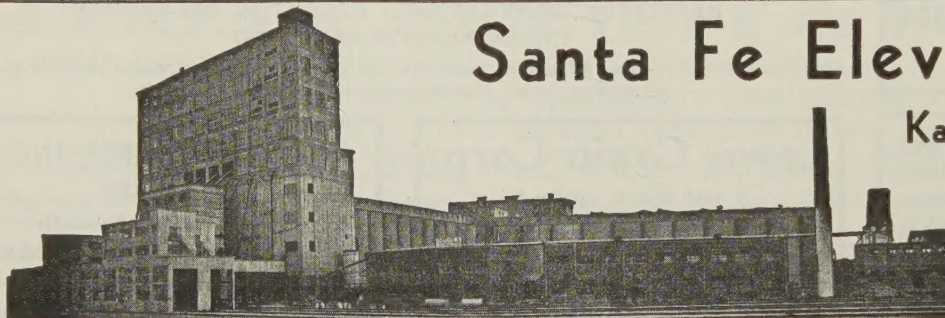
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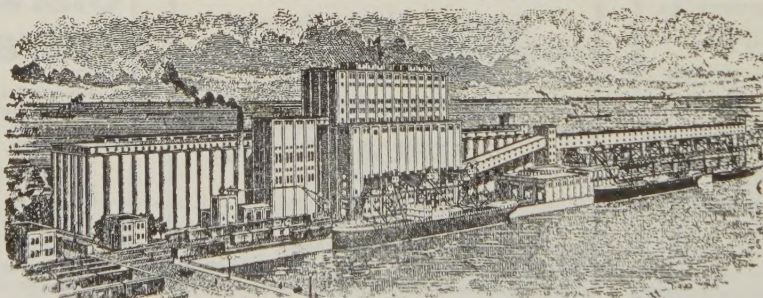
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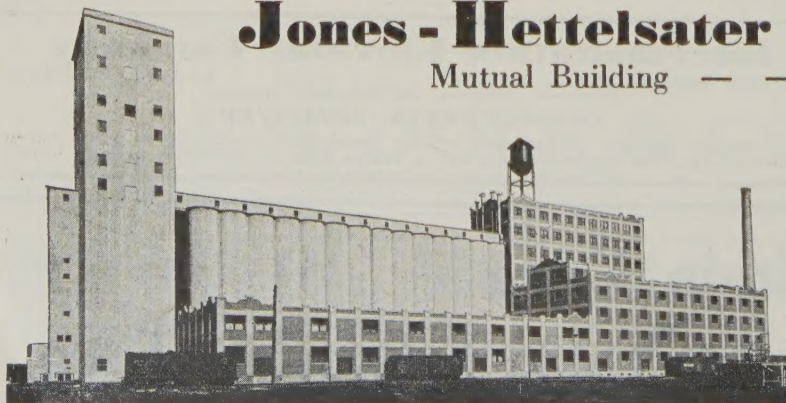
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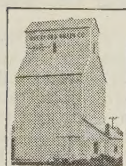
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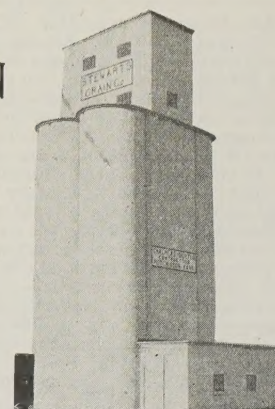
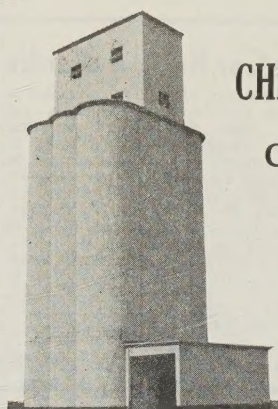
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bear a reproduction of a box car and a form showing all points at which a car might leak, thus facilitating reporting specific places where car showed leaks at destination. One of these blanks should be sent with papers for each car with the request that it be properly filled out and returned in case of any signs of leakage. Printed on Goldenrod bond, size 5½x8½ inches, and put up in pads of 50 blanks. Order Form 5. Weight, 3 ounces. Price, 40c a pad; four for \$1.00. Prices f. o. b. Chicago.

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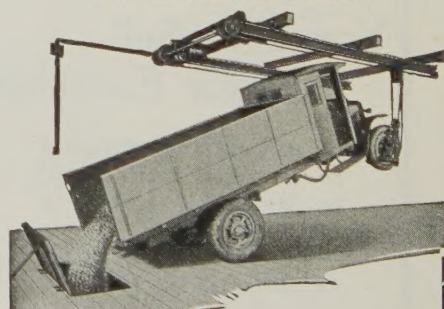
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Capacity of Elevator

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SHELLER & CLEANER—Truck dump, 12-in. Elevator buckets. W. W. Pearson, Reynolds, Ind.

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HAMMER MILL with 25-h.p. motor and all attachments. Priced to sell. Write 79N13, Grain & Feed Journals, Chicago, Ill.

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WHENEVER THERE is a real opportunity of interest to the grain trade, it is usually registered in the "Wanted—For Sale" columns of the Journal.

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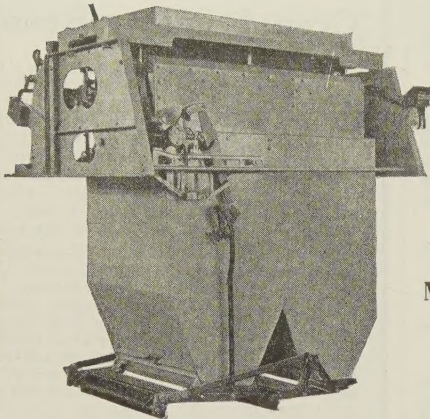
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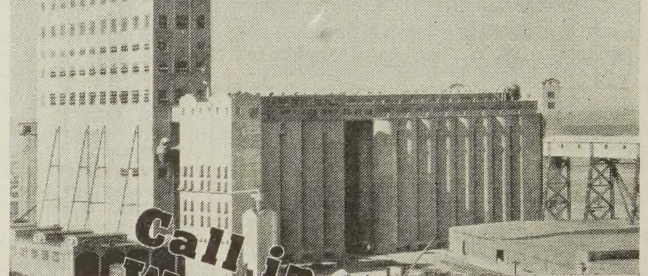
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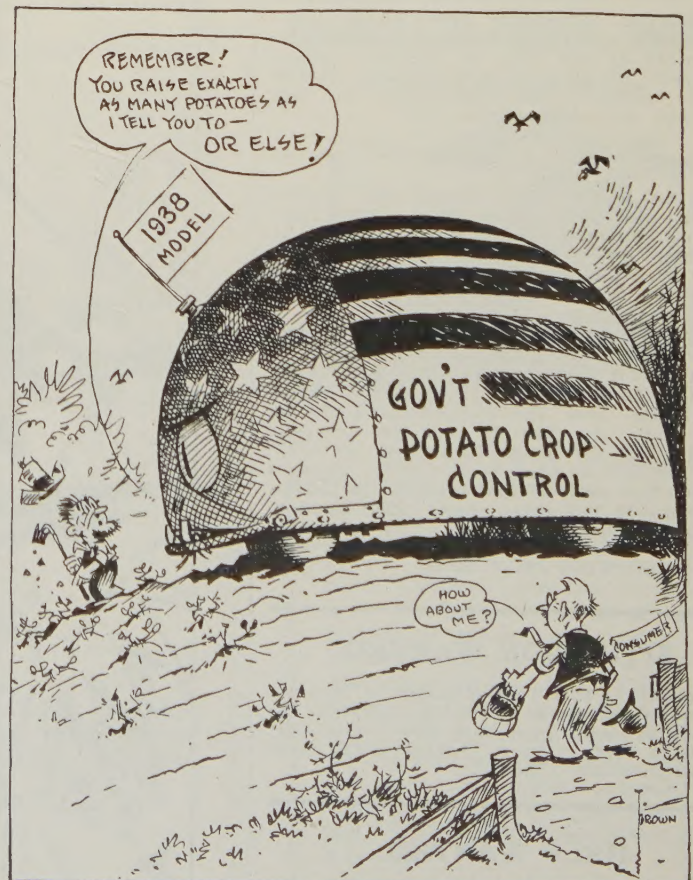
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From the Chicago Journal of Commerce

GRAIN & FEED JOURNALS

CONSOLIDATED
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332 S. La Salle St., Chicago, Ill., U.S.A.
Charles S. Clark, Manager

A merger of
GRAIN DEALERS JOURNAL
Established 1898

AMERICAN ELEVATOR &
GRAIN TRADE
Established 1882

THE GRAIN WORLD
Established 1928

PRICE CURRENT - GRAIN REPORTER
Established 1844

Published on the second and fourth Wednesdays of each month in the interests of better business methods for progressive wholesale dealers in grain, feed and field seeds. It is the champion of improved mechanical equipment for facilitating and expediting the handling, grinding and improving of grain, feeds and seeds.

SUBSCRIPTION RATES to United States, Canada and countries within the 8th Postal Zone, semi-monthly, one year, cash with order, \$2.00; single copy current issue, 25c.

To Foreign Countries, prepaid, one year, \$3.00.

THE ADVERTISING value of the Grain & Feed Journals Consolidated as a medium for reaching progressive grain, feed and field seed dealers and elevator operators is unquestioned.

Advertisements of meritorious grain elevator and feed grinding machinery and of responsible firms who seek to serve grain, feed and field seed dealers are solicited. We will not knowingly permit our pages to be used by irresponsible firms for advertising a fake or a swindle.

LETTERS on subjects of interest to those engaged in the grain, feed and field seed trades, news items, reports on crops, grain movements, new grain firms, new grain elevators, contemplated improvements, grain receipts, shipments, and cars leaking grain in transit, are always welcome. Let us hear from you.

QUERIES for grain trade information not found in the Journal are invited. The service is free.

CHICAGO, ILL., NOVEMBER 24, 1937

A WELL COOPERED car does not scatter your grain all along the railroad right of way. The more time spent in making box grain tight the less time you will need to spend with the claim agent.

DICTATORSHIP in government has at least one advantage. The new dictator of Brazil does not need votes to stay in office, and safely can scuttle coffee control. Our Washington politicians must resort to buying votes with so-called benefit payments.

SUBSCRIPTION SOLICITORS are again collecting money for subscriptions to Grain & Feed Journals with no authority from us and without remitting the money to us. The Trade Press Bureau of Kansas City, Missouri, never has been given authority to solicit or collect for subscriptions for Grain & Feed Journals. Do not pay money to strangers until you have proof of their authority to represent the Journals.

NEW CORN of some sections contains so much moisture, it cannot when shelled be safely stored and should not be shipped to distant points unless dried.

CORN GATHERED with mechanical huskers contains so many husks, buyers are puzzled to know how many pounds they must take to shell out 56 lbs. of corn. A few shelling tests of each week's receipts should help buyers to determine the gross amount needed and protect them against unexpected shrinkage.

THE REORGANIZATION bill now pending in the Congress to place the Interstate Commerce Commission, among others, under the control of cabinet members, would dangerously concentrate power in the executive branch of the government and make it easy for any administration believing in government ownership or operation of railroads to bring it about. The carriers would be subjected to political rate cuts leaving them so bankrupt the government would be the only buyer at sheriff's sale.

ANOTHER tricky trucker has come to grief, in fact the district court judge has sentenced him to seven years in the penitentiary for obtaining grain from the Farmers Exchange Elevator at Lake Park, Iowa, under false pretenses. This crafty trucker gave a check for \$150 to the elevator manager but neglected to leave it. Grain dealers who have sufficient courage to continue dealing with strange truckers after the many disclosures of their dishonesty and swindling practices are in need of a conservator.

ONE OF THE most practical suggestions which has come to any state association for a long period is the suggestion of President Stites of the Nebraska Association who in his annual address recommended the consolidation of all grain trade associations in the state in hope of presenting a united front for the promotion of the common interests of all. The stronger organization would surely wield a greater influence before railroad executives or lawmakers and instead of several struggling organizations, the trade would be represented by one strong association.

HASTE in buying and shipping new corn has earned discouraging discounts for many shippers and heavy losses for others. One shipper reported in "Grain Movement" this number, could not resist the temptation to experiment, so shipped three cars and all arrived at destination "sour." He stopped buying and went fishing. While the fine crop has matured earlier than usual, much of it was not in condition for safe shipment until the recent freeze. Fortunate possessors of efficient driers are operating them night and day and rapidly reclaiming their original cost.

More Hobbling of Trade

A parasite on the body politic it is not in the nature of a bureaucrat to construct or build anything outside the confines of his own department. Whether it is the securities exchange commission, the coal commission, the federal trade commission or the commodity exchange commission their pronouncements are always the same, invariably equivalent to "*Thou shalt not.*"

Now comes the Commodity Exchange Commission with a double-barreled shotgun aimed at the grain exchanges. One barrel is loaded with a prohibition (mark you) of trading in an expiring grain future during the last ten days of a delivery month. The other barrel is charged with more dynamite in the form of a limitation (mark it) of the number of bushels of grain any individual may buy or sell speculatively.

As to the prohibition of trading during the last ten days of the month the rank and file of experienced speculators can not be persuaded to buy or sell for their own account any considerable quantity of a future during the month of delivery, well knowing that the diminishing volume of speculation in the current future will make it difficult to get out of the market without bidding it up or offering it down unduly. For example, from a volume of 30,031,000 bus. Aug. 3, 1936, the trading in the September wheat delivery dropped to 1,283,000 on Aug. 22 on account of the approach to the delivery month on the Chicago Board of Trade. This year trading in the September delivery dropped from 27,330,000 bus. Aug. 11 to only 481,000 bus. on Sept. 18. Why bother to pass a rule to prevent a few foolhardy individuals from learning by experience it is costly to tamper with an expiring delivery?

Prohibition of large holdings by any one interest is open to serious objections. No one ever heard of anyone selling a vast quantity short, so the only effect would be to prevent investors on the long side of the market from adding to their line on declines, thereby weakening the market. We see how this operates in the security market, where directors of a corporation can not buy stock in their company to stop a panic unless they turn over the profit to the company, or hold the stock a long time. Supporting orders are lacking since the new regulation was made since those knowing most about the corporation in which they are interested can reap no benefit by buying but must bear the loss.

Every commodity market needs speculative leadership and the grain market is no exception. Without leadership there is no definite trend and no captain behind whom the investors can rally, in support of the farmers' market. Restricting either buyers or sellers will always help to drive traders, who absorb the speculative element in the farmers'

product, out of the market. The bureaucrats overlook the fact that the producer is always a seller and in need of an untrammelled market.

Why Mixed Shipments Are Discontinued

A Kansas fatalist whose shipments are invariably graded mixed, complains of the discounts and refuses to buy wheat grown in his section except upon a mixed grade basis. While he could not afford to pay a No. 2 hard price for the mixed variety of wheat brought to his elevator by his farmer patrons, he could, by holding conferences with his farmer patrons, encourage them to stop growing such a wide variety of wheat and plant seed of a pure variety, thereby insuring the grain dealers interested in marketing the product of their farmers to ship pure varieties and thus escape the usual discounts.

All millers know, and wheat millers generally should know, that makers of cakes, crackers and pastry cannot make a flour well suited to their needs from mixed wheat. What they want is white or soft wheat strong in starch. The barley shippers have learned through extensive experience, that maltsters will not buy large berry two row barley, and if it is mixed in with the most desirable barley obtainable, it wins a discount for the whole lot.

Enterprising elevator operators who help their farmer patrons by assisting them in obtaining choice seed of pure varieties, not only help the grain growers, but they also help their own business by increasing the chance of earning a premium on their shipments instead of a discount. Processors of most grains are manufacturing products for special uses, and whenever they attempt to make a product for an exacting buyer, they need grain of pure variety. All interested should readily recognize the difficulty of supplying the demand of various industries from a mongrel mixture.

Grain dealers of the grain surplus states would not experience much difficulty in interesting the state experiment station in helping to convince their farmer patrons of the folly of continuing to grow mixed varieties. It should not be difficult to call all wheat growers to their local market for their conference with representative of the experiment station each year at seeding time, for a review of the wasteful practices of planting mixed varieties of grain, and every dealer who organizes and calls such a conference wins the approval and support of grain growers interested in obtaining better returns from their toil.

DAMP COBS and grain dust can not be safely stored in a close bin. Spontaneous combustion has often resulted and can be depended upon to start many more mysterious fires.

Tail to Wag the Rye Dog

With the customary fanfare of trumpets the A.A.A. announced Nov. 9 that the Surplus Commodities Corporation would buy rye until Mar. 31 in a declared "effort to stabilize cash rye prices."

In this effort to manipulate the rye market the Government will find it easy to run a corner. Commercial stocks of rye Nov. 8 were only 6,067,000 bus., against 6,049,000 bus. a year ago; and neither the business conduct com'te of the Board of Trade nor the Commodity Exchange Administration will crack down on the manipulation. If a private cash grain house buys a lot of September corn to meet the needs of its trade it is all wrong; but if some bureaucrat in the A.A.A. decides to use taxpayers' money to corner the rye market it is all right.

Millers of rye flour and distillers of rye whisky and the great mass of consumers of rye bread among the poorer classes evidently were not consulted before this price boosting campaign was planned. They might have pointed out that the price of rye at 70 cents is high enough considering that it sold at 30 cents in November, 1932, and never sold as high as 70 cents in the years 1931, 1932 and 1935. Evidently the mental processes employed in arriving at the fixed price to be paid are as secret as a konklave of the Ku Klux Klan. When arbitrary action in price fixing is substituted for the ordinary rules of trade, merchants, of course, understand any study by themselves of market conditions is futile, and their recourse is to abandon the rye market to the government, selling the grain as fast as received, which stabilizes the market downward to the government price, as in the case of coffee, corn and cotton. When the government announced its corn loan of 50 cents Nov. 2, December corn closed at 58 $\frac{3}{8}$ cents and Nov. 15 it sold at 53 $\frac{3}{8}$, a drop of over 5 cents.

A consideration of the statistics surrounding the rye market indicates that nothing startling in the way of price movements need be expected. The United States rye crop is only 51,869,000 bus. against the world crop of 744,899,000 bus., not counting Russia, and for 7 per cent of the world's crop to materially affect the price of the other 93 per cent would be a case of the tail wagging the dog.

The international situation is bullish, the crop of 21 leading countries, not counting Russia, having decreased every year since 1934, when it was 839,682,000 bus.

Since Aug. 1, Duluth, Minneapolis, Chicago and Milwaukee, the leading rye markets, have received 13,733,000 bus. of rye, but on Nov. 8 had only 3,242,000 bus. in store, showing the grain is rapidly going into consumption without the

artificial aid of the A.A.A. Since Aug. 1, exports have exceeded 2,000,000 bus.

The puny efforts of the A.A.A. to control the price of rye are ridiculous in view of the overwhelming crops of 485,000,000 bus. grown in Germany and Poland, which countries have always dictated the price of rye, except when Russia, producing 792,000,000 bus. was a factor. How the bureaucrats love to meddle with economic problems beyond their capacity to comprehend.

The Encouraging Reduction of Fire Hazards

Fire underwriters and property owners generally have long been deeply puzzled by the large number of fires credited to "cause unknown." Forty years ago many fires were credited to locomotive sparks, lightning and friction, but now these causes are no longer blamed for the large number of fires because, the elevator owner has discontinued the covering of his plant with wood shingles and siding. The liberal use of galvanized iron has reduced the number of fires traceable to locomotive sparks to the bottom of the list of known causes of elevator fires.

Equipping elevators with standard lightning protection has affected such a creditable correction of this hazard that some years go by without even one elevator fire being charged to lightning, and the reduction of friction in elevator bearings through the extensive use of anti-friction bearings and automatic lubricating devices has been so great that the elevator fires now credited to friction are few as compared to the large number annually reported ten years ago.

These corrections of known fire hazards have helped not only to protect property owners from destructive fires, but these improvements have effected a material reduction in the number of fires and in the cost of fire insurance. All of these improvements have been most encouraging to all concerned and while they may have contributed to a reduction in the number of mysterious fires credited to unknown causes, the number of elevator fires annually credited to unknown causes still leads the list. When the cause of every fire is discovered, elevator owners will be able to take intelligent steps to correct these causes and effect a further reduction in the number of mysterious fires. So long as all concerned are in the dark as to the exact cause of these mysterious fires, little reduction in their number is probable.

One of the most encouraging results of the vigilant work of investigators for the Mill Mutuals, has been the disclosure of incendiaries who have been actively afflicted with chronic pyromania. In recent months the investigators have obtained confessions from a young Michi-

gan lad who seemed to enjoy telling of twenty-three fires he had started.

A New York boy admitted setting a number of other fires and now comes the confession of an Ohio mail carrier, who recently burned a flour mill, that he started forty other fires. His confession which is recited in our Ohio news column this number is startling.

Last year vigilant investigators brought to light two Indiana incendiary fires of long ago, and thereby, effected a further reduction in the number of so-called mysterious fires.

The confessions of these four arson addicts is sure to open wide, the eyes of other investigators, and encourage greater vigilance of all interested in discovering the cause of more of our mysterious fires.

Not only do these alarming disclosures intensify the vigilance of investigators and property owners, but the incarceration of those guilty of arson helps to discourage other pyromaniacs afflicted with an irrepressible desire to burn the property of others.

Hours and Wages

Altho members of Congress may not have very definite ideas regarding the requirements of industrial and business plants, they seem to have no hesitation in attempting the regulation of hours and wages for all. Congress has undertaken the rigid regulation of so many human activities during recent years, it is no wonder that the members of Congress feel competent to regulate everything efficiently. The bill to regulate the weather, the sun, moon and stars has not yet been reported out of committee, but it may be expected soon.

In stepping up of wage minima to 40 cents per hour and stepping down work weeks to 40 hours, the bill overlooks the fact that geographical, racial, social, agrarian and economic conditions differ radically as between sections and communities, and as between individuals in the same section or community.

The bill will harm the country grain elevator operator more than would the proposed farm bill, as the cost of operating a country elevator would be increased, by reason of the time and one-half for overtime that the elevators must operate to accommodate the farmer unloading grain during the inevitable annual rush after harvest.

The bill fixes extreme and unfair penalties against employers.

It will require an enormous organization of investigators and enforcement officers with abundant opportunities for favoritism and corruption.

The Board is not bound by rules of evidence nor customary procedure when conducting its hearings.

No appeals lie to the courts from the findings of fact by the Board if there is

any evidence whatever to support them.

The bill contains arbitrary provisions for making orders effective before appeals can be filed or even before the employers can know that orders have been promulgated against them.

In urging the defeat of the bill, the National Co-operative Council, the central organization of the farm co-operatives of the United States, points out that the bill creates a government by five men who may be despots, instead of government by law, that the bill will effect a large increase in farmers' production and distribution costs, and that the final result would be to make commercial and industrial concerns subservient to a government bureau at Washington.

Harold Moulton, president of the Brookings Institution, declares that the work week which was shortened 13 per cent from 1900 to 1929, and 20 per cent from 1929 to 1936, cannot be shortened further as proposed by the bill without cutting down the standard of living of the American people.

It should be obvious that increased costs of labor per hour and reduction in hours per day will so raise costs that the consumer cannot buy as much. The Machinery and Allied Products Institute reports that in 1929 one man finished 112 pounds of steel per hour, while in 1935 the per man production was reduced to 80 pounds per hour. Such a maladjustment can only result in a slowing down of buying, and operation of steel mills at less than one-half of capacity.

If business men are to be relieved of this continual stream of regulatory legislation, it will be necessary for them to give more vigilant attention to what is proposed in Congress as well as to communicate frequently with their representatives in Congress. Our law makers may be guided by the best intentions in the world, but their lack of practical knowledge of the needs of business makes it easy for them to drift far afield.

Ithaca, N. Y.—A horse is more valuable today, in terms of other commodities, than at any time in the last 20 years, says Philip Henderson of the New York State College of Agriculture.

Senate Gets First Draft of Farm Bill

The Senate Com'ite on Agriculture completed a draft of a farm aid bill Nov. 22 on which to begin debate Nov. 23.

The bill provides for the ever-normal granary, parity payments and crop control over wheat, corn, cotton, tobacco and rice for three years beginning in 1938. Soil conservation payments are continued. The voluntary acreage quotas of wheat and corn would be made compulsory if two-thirds of the growers so vote. For exceeding the marketing quota a penalty of 50 per cent of the parity price would be assessed on wheat and corn. Benefit payments on rough rice would be ½ cent per pound after 1937.

The cost of farm subsidy under the Senate bill is estimated at \$800,000,000, and the bill provides that the Sec'y of Agriculture shall estimate the cost for the budget bureau, which would then advise the Congress, which in turn would have to find means of levying taxes to meet the requirement.

The senators received printed copies of the bill at 10 a. m., Nov. 23, and when Senator McNary demanded the bill be read in its entirety consideration was postponed until Nov. 24.

Senator Borah says: "I cannot reconcile myself to the thought that the proper solution of the farm problem lies in the reduction of production in this country when we really have not sufficient food to take care of our people upon any reasonable standard of living. There must be some way more practicable and certainly a more humane solution than that of destroying food. So long as we have, as the President has said, one-third of the population of the United States in a state of need and want we certainly are not on the right road when we are reducing that which they are nightly praying for and that which they need in order that they may take care of their children and their families."

The House Com'ite has agreed on marketing quotas and penalty taxes for wheat and 2 cents per pound penalty for growing cotton in excess of permitted quotas; and Chairman Marvin Jones says the bill probably will be ready later in the week. Mr. Jones' emphatic statement that the bill will not include processing taxes does not indicate that another revenue bill will not levy such a tax in compliance with the president's demand that Congress find the money. The House Com'ite had voted 15 to 8, after bitter wrangling, to reject a wheat sub-com'ite's plan for processing taxes on flour to raise \$100,000,000 annually. It agreed, 13 to 9, however, to include marketing quotas and penalty taxes on corn in conformance with Sec'y of Agriculture Henry A. Wallace's plan.

A Confession by Carelessness

"I am not much of a mathematician," said Carelessness, "but I can add to your troubles, subtract from your earnings, multiply your aches and pains, take interest from your work, and discount your chances for safety. Besides this, I can divide your thoughts between business and pleasure and be a potent factor in your failures. Even if I am with you only a small fraction of the time, I can lessen your chances for success. I am a figure to be reckoned with. Cancel me from your habits and it will add to your total happiness."

—Lloyd Seitz.

Asked—Answered

[Readers who fail to find trade information desired should send query for free publication here. The experience of your brother dealers is worth consulting. Replies to queries are solicited.]

Color Test for Carotene?

Grain & Feed Journals: In a recent issue of the Journal I read of a new test that has been developed for determining the carotene content of alfalfa meal, etc., by a comparison of the color with a known standard. Where are these tests made and what is the approximate cost?—Ralph Kail, Farm Buro Co-operative Ass'n, Columbus, O.

Ans.: The test is made by extracting the pigments from the material to be analyzed and then separating the carotene from the other pigments by the use of suitable solvents. The amount of carotene in the resulting solution is then determined by comparing the intensity of the yellow color with the color of solution of known composition.

To make sure the pigment being tested is carotene and not one of the other yellow plant pigments, the quality as well as the intensity of the color is determined. This determination is made on a spectrophotometer.

Many of the manufacturers of commercial feeds are taking advantage of the chemical method of determining the vitamin A potency to insure that the ingredients which make up their feeds furnish an adequate amount of carotene for the purpose for which they are intended.

Before these chemical methods were developed, the only way to determine the vitamin A potency of a product was to feed it to experimental animals. These animal feedings tests required from four to eight weeks and cost from \$30 to \$50. The chemical test requires two or three hours and costs only a small fraction of that of the animal assay.

This color test was described by W. J. Patterson and Prof. J. S. Hughes of the Kansas College of Agriculture before the American Chemical Society Apr. 14. Texas Exp. Station, College Station, Tex., is working on it and it is in an experimental stage in other state stations, but has not yet come into use in commercial laboratories, apparently because the method has not been perfected.

Selling Grain Covered by Prior Liens?

Grain & Feed Journals: A year ago I got a rubber stamp made to put on the back of my checks given in payment for grain bought, reading as follows:

"I hereby represent to the maker of this check that I am the sole owner of the grain or product in payment for which this check is issued, and that there is no mortgage, landlord's or other lien on such grain or product."

This stamp is on the back of one of four checks I gave a farmer as advance payments on grain covered by a memorandum of agreement reading as follows:

"John Jones has this day sold to Norman F. Butterfield bus. of at \$..... per bushel, to be delivered at buyer's elevator in on or before days from this date.

"Conditions entering into and forming part of this agreement: If grain is below grade contracted, same will be applied on contract at the market difference at the place of inspection and delivery. Inability of buyer to receive grain at or during the time above fixed for delivery by reason of insufficient elevator room caused by strikes, car shortage or restriction in shipping imposed by the railroads, shall not nullify this contract, but shall merely operate to extend the time of delivery the number of days the buyer's elevator could not be operated for lack of storage room. When time of delivery is extended by reason of insufficient room in buyer's elevator from the above causes, the buyer will call for the grain in the order of its purchase, giving the seller at least 48 hours previous notice of his ability to receive the grain."

The farmer to whom I gave the four checks signed three of these agreements.

Now I find the crop is mortgaged to an auto dealer; and several others have had a justice get out papers to help collect labor, gasoline and grocery bills.

I thought I was O. K. on the deal but my attorney advises me that neither the stamp on the check or the agreement are worth a thing,

and refused to help me on the deal. What are these things good for then? Is there no way a grain dealer can get protection against these crooks?

Is there any legal means I can take to recover my money and prosecute this fellow?—Norman F. Butterfield, Ritchie, Ill.

Ans.: The memorandum of agreement with seller of grain is proof positive that seller knowingly swindled you; and the presentation of the agreement to the county prosecuting attorney should result in the prosecution of the farmer on the prima facie evidence that he signed the agreement for the purpose of obtaining money for grain he did not own.

The seller should be prosecuted by the county attorney without any expense to buyer, who would appear only as the complaining witness. When seller is arrested for swindling, his friends probably will make good buyer's loss. Both the agreement and the statement on the back of the check that same is made "in payment for grain free from all liens" is positive proof of seller's intention to swindle, and that he obtained money by false pretenses.

In a civil suit the agreement and the check for money paid for grain not his own is ample evidence to obtain judgment, on which to levy on any of seller's property.

Crop Consumption

CITY VISITOR:—"This has been a bad year for corn, hasn't it?"

FARMER'S WIFE:—"Yes, but 1869 was worse. I remember we cooked some roasting ears for dinner and father ate fourteen acres at one meal."

E. M. Kelly, Nashville, Tenn., Passes On

E. M. Kelly, 81 year old patriarch of the Nashville, Tenn., grain and milling business, and conservative, capable leader of the southeastern trade, for half a century, passed away recently of a heart ailment.

Mr. Kelly was a miller by inheritance. His father was a Nashville miller before him.

Thru half a century at the head of the Liberty Mills, Mr. Kelly served repeatedly as president of both the Nashville Grain Exchange and the Southeastern Millers Ass'n, and carried his ass'n influence into national circles by serving as a com'te man for and as president of the Millers National Federation.

A genial, kindly personality, his many friends regret the passing of Edmund Matthew Kelly.



E. M. Kelly, Nashville, Tenn., Deceased.

Washington News

Advocating wide changes in policy to encourage investment of idle funds, expansion of industry and employment, Senator Josiah W. Bailey, North Carolina, urged the Senate on Nov. 17 to favor repeal of the undistributed profits tax.

Government loans on wheat to bolster wheat prices is unlikely, Sec'y of Agriculture Henry Wallace said Nov. 10. He remarked: "Wheat prices are not down to the disastrous level of cotton. The government is now offering 9c loans on cotton and 50c loans on corn."

The House labor com'te is reported to have decided to push the controversial Black-Connery wage-hour bill thru to the floor by one means or another. While hoping for a change of heart in the rules com'te where the bill has been held, a petition is being circulated to force the bill to the floor. The signatures of 218 or more members of the House would bring the bill under consideration beginning Dec. 13.

Senate agricultural com'te chairman Ellison D. Smith, South Carolina, watching a House deadlock on crop control legislation, has agreed to use the Pope-McGill bill in the "work bench" model manner favored by Sec'y of Agriculture Wallace. Meanwhile, another House sub-com'te, headed by Representative James G. Polk, Ohio, became snarled over the constitutionality of a farm referendum plan for marketing quotas and penalty taxes.

A majority of the members of the Senate agricultural com'te announced Nov. 17 that they would sponsor a "Middle-of-the-Road" policy in dealing with factions at war over whether proposed agricultural bills should provide voluntary or compulsory control. Meanwhile the House com'te approved the voluntary principle. Several days ago the House com'te decided to eliminate processing taxes from its bill and to favor voluntary control for cotton, wheat and rice.

Brandon, Man.—The United Farmers of Manitoba held a 3-day convention here Oct. 26-28, debating 22 resolutions on subjects ranging from the Canadian wheat board to British North America Act amendments. One resolution recommends that the Dominion assume all debts contracted by provinces or municipalities for direct relief between 1930 and 1937.

Coming Conventions

Trade conventions are always worth while, as they afford live, progressive grain dealers a chance to meet other merchants from the same industry. You can not afford to pass up these opportunities to cultivate friendly relations and profit by the experience and study of others.

Nov. 27. Western Seedmen's Ass'n at Hotel Kansas Citian, Kansas City, Mo.

Nov. 29, 30. Farmers National Grain Dealers Ass'n, Hotel La Salle, Chicago, Ill.

Dec. 5, 6, 7. Southern Seedmen's Ass'n, Hollywood Beach Hotel, Hollywood, Fla.

Dec. 7, 8, 9. Farmers Elevator Ass'n of South Dakota, Aberdeen, S. D.

Feb. 1, 2, 3. North Dakota Farmers Grain Dealers Ass'n, Fargo, N. D.

Feb. 9, 10. Farmers Grain Dealers Ass'n of Illinois, Marquette hotel, Peoria, Ill.

Feb. 16, 17, 18. Farmers Elevator Ass'n of Minnesota, Minneapolis, Minn.

Feb. 22. Pacific Northwest Feed Ass'n, Seattle, Wash.

Feb. 22, 23. Farmers Grain Dealers Ass'n of Ohio, Toledo, O.

March 27, 28, 29, 30. Society of Grain Elevator Superintendents of North America, Kansas City, Mo.

May 9, 10. Illinois Grain Dealers Ass'n, Danville, Ill.

May 13. Oregon Feed Dealers Ass'n at Portland, Ore.

U. S. Land Fertility Steadily Increasing, Not Decreasing

By B. W. SNOW, Chicago, Ill.

Propaganda of depleted soil fertility, with a background of possible food insufficiency, presents an emotional appeal which is well calculated to whip Congress into a spending frenzy. This theory of soil fertility depletion is urged by officials of the U. S. Department of Agriculture, and these officials as well as members of Congress, apparently fail to realize that such a claim is a confession that the work and enormous expenditures of the Department of Agriculture during the past 60 years has been a complete failure. Certainly that must be the case if the productive capacity per acre of our farm lands has decreased as the years pass in spite of the intensive teaching and free money spending of the largest and most expensive department of our government.

The charge, however, that the potential fertility of our farm land has been lowered by our farm management in the last 60 years is not true. The proof for this denial is shown in the annual records of the U. S. Department of Agriculture.

Yield per acre from year to year involves other factors than soil fertility. Seasonal influences, weather and rainfall, insect enemies and plant disease are variable factors, radically different in different years. For this reason the average rate of yield does not represent the producing capacity of the soil from year to year. To get at the facts it is necessary to eliminate the seasonal factors in order to determine the potential soil yield capacity, that is to say the fertility, at different periods of time. The most fruitful soil in America might fail in production entirely under pressure of seasonal factors, and yet that failure in no way represents any change in the potential capacity of the soil.

The official records of the Department of Agriculture enable us to eliminate seasonal factors and determine potential soil capacity from year to year. Each month during the growing season the "condition" of the crop is reported in percentage of what it would have been had there been no damage from seasonal factors. In other words, with 100 representing the full producing capacity of the soil, the condition figure reported shows the discount chargeable to weather experience, insect or disease damage or other seasonal factors. The final harvest "condition" report and the actual recorded yield per acre, therefore, furnish data by which a simple calculation determines the actual potential crop capacity of the soil from year to year—in other words, furnishes the measure of present soil fertility.

More than one-half of the cultivated land area of the U. S. is devoted to growing corn, wheat and oats. The records show that the

land devoted to each of these crops, by reason of proper land management, has given a steady, continuous and unbroken increase in productive capacity during each decennial period since 1870-79. Land fertility has been steadily increasing and not decreasing.

The official record for these crops is shown in the tables herewith, and attention is particularly invited to the index figure column which shows the steady and relatively uniform increase in land fertility based upon the potential capacity of the soil in bushels for each decade.

The figures presented represent the average for each decade and are from the yearly reports of the U. S. Department of Agriculture. Instead of a decreasing land fertility, the official record shows that there has been a steady and consistent increase in the potential productive capacity of the average acre devoted to each crop from decade to decade for the last 60 years. The American farmer who is now being called a land butcher has not only conserved but has increased the fertility of his soil. He has done it not only by direct utilization of commercial fertilizers, phosphates, lime and such constituent elements, but by crop rotation, soil renovation and growth and plowing under of nitrogen fixing plants, all calculated to not merely retain fertility but to increase it.

To now accuse this man of being a land butcher and a wastrel is an injustice that cannot be defended. The record says that such a charge is untrue.

E. R. Gardner, Deceased

Edwin Ramsey Gardner, 67, for 25 years the chief grain inspector for the Memphis Merchants Exchange, passed away Nov. 4, at his home in Memphis, Tenn.

Mr. Gardner's experience with grain began in his boyhood. Born at Augusta, Ga., the son of Gen. William Montgomery Gardner of the Confederate Army, Mr. Gardner went to Memphis at the age of 16. Soon thereafter he became connected with John K. Speed early organizer, and the first president of the Memphis Merchants Exchange, with whom he stayed for 10 years.

He left the employ of Mr. Speed in the early days of grain inspection, prior to adoption of the federal grain standards, to become chief grain inspector for the Memphis Merchants Exchange. Under him M. B. Houseal, present chief inspector for the Memphis Merchants Exchange, received his training.

In 1924 Mr. Gardner opened his own warehouse and an active business career that lasted until ill-health forced his retirement. Surviving Mr. Gardner is his widow, Mrs. Irma Field Gardner.



E. R. Gardner, Memphis, Tenn., Deceased.

Terminal Elevator at Odessa

By GERALD G. REED

Former grain handling and storage practices in Russia were very crude. The old elevators in small towns were really little more than huge "boxes" set on the railway platforms. These bins were about 12x18x10 feet, stoutly built, and covered with a shed roof; all the way from four to eighteen or twenty of these bins comprising one building, or warehouse (or elevator).

The grain was handled by hand. For storage on the farms, the grain was often just put in piles. Wastage under the old system was considerable.

The construction program for the new five year plan calls for a change in all of this. The Agricultural Bureau of the Government has prepared very forward looking plans for warehouse and handling facilities and if actual construction approaches these prospects, the grain handling facilities will not only be ultra modern, but of huge size, capable of adequately serving a national grain industry of gigantic proportion.

For lack of skilled labor the concrete structures are quite often faulty. I saw many buildings in their cities, apartments and hotels, the concrete surfacing of which had begun to crumble and spall, and the buildings were only one or two, or at the most, three years old. At one place where they were unloading cement for concrete elevators, I saw much evidence of lack of skilled workmanship.

The cement was in very crude containers, wooden barrels holding perhaps two hundred pounds, too lightly built to hold such heavy material. They were continually bursting and the deck of the barge was well covered with wasted cement. The barge had an electric hoist, a very late model, to bring the barrels from the hold. The hoist was being abused constantly by allowing the hook to catch on the deck and straining it in other ways. But in spite of such examples of inefficiency, concrete elevator construction is going on at a very rapid rate.

The 1937 grain crop, from all indications, is a bumper crop and will tax the storage facilities to the utmost.

The concrete grain elevator at Odessa shown on our outside front cover, with its capacity of 41,000 metric tons, is reputed to be the largest in Europe. In bushels the amount is 1,506,400.

Uniform Transit Rules Proposed for Eastern Roads

A joint committee of representatives from the Central Freight Ass'n, the Trunk Line Ass'n, and the New England Ass'n is at work on a set of 26 uniform transit rules governing the mixing of feed in eastern territory, which it hopes to publish and have in effect about Jan. 1.

The uniform rules are expected to replace the somewhat variable rules that now exist on eastern lines in different freight territories. They will make the same rules apply thruout Official Classification territory, which includes eastern Illinois, and is bounded roughly on the south by the Ohio and Potomac rivers.

The rules will apply to all products falling in the classification of grain, grain products and grain by-products, including products like soybeans, soybean meal, alfalfa meal, and other feed ingredients.

Calendars Received

Morse Chain Co., Ithaca, N. Y., is already distributing to its friends in the grain trade copies of its handsome 1938 calendar, showing three months on each sheet, the current month differentiated from the rest by bold face numerals and type. Each of its 13 pages has at the top a reproduction of Morse chain products.

CORN				
Decades	Actual Bus. Per Acre	Condition at Harvest	Potential Bus. Per Acre	Index 1870-'9 = 100
1870-'9.....	27.1	97.3	27.9	103
1880-'9.....	24.1	83.8	28.8	107
1890-'9.....	24.1	81.0	29.8	118
1900-'9.....	25.8	78.4	32.9	123
1910-'9.....	25.6	74.8	34.2	120
1920-'9.....	23.0	77.1	36.3	127
1930-'6.....	21.5	61.4	35.3	
WHEAT				
Decades	Actual Bus. Per Acre	Condition at Harvest	Potential Bus. Per Acre	Index 1870-'9 = 100
1870-'9.....	12.3	91.9	13.4	106
1880-'9.....	12.0	85.3	14.2	122
1890-'9.....	13.2	80.9	16.3	133
1900-'9.....	14.1	79.2	17.8	141
1910-'9.....	14.6	77.2	18.9	143
1920-'9.....	14.2	74.3	19.1	157
1930-'6.....	13.0	61.9	21.0	
OATS				
Decades	Actual Bus. Per Acre	Condition at Harvest	Potential Bus. Per Acre	Index 1870-'9 = 100
1870-'9.....	28.4	92.7	30.6	94
1880-'9.....	26.5	91.9	28.8	107
1890-'9.....	26.2	79.8	32.8	121
1900-'9.....	29.5	79.4	37.1	130
1910-'9.....	32.1	80.7	39.8	132
1920-'9.....	31.2	77.3	40.4	136
1930-'6.....	26.0	63.0	41.5	

Letters from the Trade

[The grain dealers' forum for the discussion of grain trade problems, practices and needed reforms or improvements. When you have anything to say of interest to members of the grain trade, send it to the Journals for publication.]

Farmers Storing Corn

Grain & Feed Journals: Farmers will not sell their corn at present prices. All are storing all they can hold. It looks pretty bad when the government will loan to their chosen faithful few 50c on corn, and the other poor cuss has to sell his for 35c.—O. L. Barr Grain Co., Bicknell, Ind.

Soil Erosion Our Best Friend

Grain & Feed Journals: Co-operation, means fight, like producers banding against consumers. Conservation, means lack of faith in future resources.

Soil erosion is our *best friend*. Continually it uncovers the vast deposits of mother earth's potential wealth, taking the silken-like material from the mountains, hills and inaccessible places, spreading it like dew over the land to make those rich alluvial soils. Further to serve the same purpose we have lightning and those highly beneficial dust storms. Man in his blindness would try to check these, but in this he will not succeed.

Every one should know that all things are in a state of flux. The hills must be leveled off. Those harmonizing with this plan are actually hauling materials from certain hills and spreading on their own soils. It may cost \$20.00 per ton, but the yields are often doubled the first year. It would seem that a mild regulation that would restrict the obstruction of soil erosion, WITHOUT government expense, would be very timely. Look toward the mountains—"Thar's gold in them thar hills."

Better than conservation is restoration. Nature's way is re-creation.—Block Elevator, Indianola, Ill.

Trucks in the Pacific Northwest

Grain & Feed Journals: Trucking competition is so keen in the Mid-West and East that it is there regarded as the industry's major problem. Not only hay and straw, here our chief concern, but grain, millfeeds and mixed feeds are peddled from farm to farm by itinerant truckers, who pay no taxes, submit to no regulation, get no margin, and whose only positive accomplishment seems to be to demoralize prices and quality standards.

Our members have a good deal to say about trucking competition, but they haven't met any yet. Mills in the Mid-West encourage truck peddlers, and in some cases merchandise the bulk of their volume, even of mixed feeds, thru itinerant peddlers. Grain and feed quality standards vanish in the sea of unrestricted trucker competition, and the condition, as described to me at the national convention, fully justifies the classing of the trucker as the industry's greatest single national problem.

This year (1937) the first state law trying to regulate truckers was passed in Nebraska but has not yet proven its worth. In many places trucking over state lines makes single-state legislation relatively useless. Nebraska's law seems similar to our own first, and rather feeble, Commission Merchants Law, which we found so wholly inadequate, and which we have had to revise and tighten, so drastically and frequently. In all fairness, I believe we are probably six years ahead of the field on the matter of trucking compe-

tion, excepting only California and Oregon.

Two things seem to me most difficult in handling this problem nationally—I mention them casually, since they are not our problems. One is the scattered nature of the anti-trucker campaign, uncoordinated under any national body, tho Chet Weekes, an able leader, is trying to coordinate it. Interstate trucking makes this the chief problem. The other is the lack of a working alliance anywhere, such as we have, between the industry's organizations and the great farm organizations, whose support has enabled us to secure legislation of mutual benefit to this industry and its farmer customers.—Floyd Oles, manager, Pacific Northwest Feed Ass'n, Inc., Seattle, Wash.

Texas Truck Load Limit Law Enforced

Grain & Feed Journals: A brief story in the *Dallas News* for Nov. 17 reads:

"Fines and court costs totaling \$1,467.40 were collected Monday in Justice Baldwin's court in 24 cases involving violation of the state highway regulations.

"The collections set a new record for that court and the violations to which all parties pleaded guilty were for overloading and operating carrier trucks without permits.

"Fines ranged from \$209 down to \$10 and were allocated as follows: Justice Baldwin's court received \$60 in fees; the district attorney's office received \$120, and the county general fund received \$329.90. The remainder of \$957.50 went to the Texas Railroad Commission for its law enforcement fund. All of the complaints were filed by inspectors for the Commission."

Evidently the state has experienced a decided renewal of interest in enforcing Texas' load limit law.—G. E. Blewett, sec'y, Texas Grain & Feed Dealers Ass'n, Fort Worth, Tex.

Selling Corn Freely

Grain & Feed Journals: Very little corn sealed in this territory, altho paid emissaries of the government are soliciting the business and holding meetings. Our farmers are pretty conservative and they will probably go to the bank and borrow money.

Receipts of corn everywhere are enormous. Just talked with an elevator man from the northern part of the state. He said every elevator in his community was handling a lot of corn, and shipping it to Chicago, the closest market. They like ourselves are not making any money on it.

It is happening now as it often does when there is a little extra business. Chicago houses are hiring truckers to go into a community where there is plenty of facilities for handling grain and have the bulk grain trucked direct from the farmers to the Chicago elevators. One of the oldest Chicago houses is now doing that in northern Indiana, and we have suffered it about as long as we intend to without broadcasting the fact to the grain trade. They just bought 3,000 bushels of corn within less than three miles of a northern Indiana elevator that is thoroly equipped to handle the business. They are hiring a trucker to buy and shell the corn and haul it to their Chicago plant. Altho they have been protesting for three years that they were doing nothing of the kind, we know they are.—Goodrich Bros. Co., Winchester, Ind.

Kansas Farmers Refuse Soil Conservation

Farmers of Hamilton, Haskell and Stevens Counties in the southwest corner of Kansas, very close to, if not in, the dust bowl, have voted against Uncle Sam's soil conservation plan, the total vote standing 332 for the plan, 382 against.

Under the plan 75 per cent of the farmers voting must favor soil conservation to create a soil conservation district. Voting showed 110 for, 115 opposed in Hamilton county; 70 for, 151 opposed in Haskell county; 152 for, 116 opposed in Stevens county.

The adverse vote reported by county agents is attributed to fear of compulsory methods in the plan. Even in the dust bowl farmers want to retain their independence and prefer to operate their farms free from bureaucratic dictation.

Eulogy of a Country Grain Merchant

By S. W. WILDER, CEDAR RAPIDS, IA., past-pres. Grain & Feed Dealers National Ass'n

A country grain dealer is a business man in a town of from 100 to 3,000 people. In the town are stores, banks, churches, schools, doctors, lawyers, teachers, workers, who serve and depend upon from 200 to 300 farm families in the trading area of the town. These farm families harvest from 500,000 to 1,000,000 bushels of grain each year. This grain, this new wealth comes to the grain elevator to be converted into cash, which is exchanged in turn for the necessities and luxuries of modern living.

The country grain merchant is the connecting link between the wealth of a community and the outside business world. It is his job to take the grain whenever it comes to him, in whatever condition nature matures it, and conserve it. He must be prepared to receive one bushel, or 10,000 bushels at any time, and handle it to the best interests of the community.

Because a fickle and changing nature determines the season, the harvest, the character of the crop, and the condition of the grain, the grain elevator operator must suit his hours of labor and his daily activities to the changing needs of the farmers of his community; like the farmer and the doctor, he cannot call his time his own. Grain must be handled and saved. Some days the grain dealer must be at work early and keep working until late. At other times he sits in his elevator office with no business at all. The grain dealer cannot avoid working to exhaustion one week, and, loathing the next. The weather man commands. Both the farmer and the grain dealer must obey.

Country grain dealers provide substantial equipment for weighing, cleaning and loading grain. The permanent investment in facilities will total from \$10,000 to \$50,000 in each community, or about \$500,000,000 for the facilities in the grain belt. Operating these elevators requires thousands of trained grain men, a great deal of ready cash, and long lines of credit.

On the elevators a million farm families depend for correct weights, honest grades, and the world's best market prices. In most grain belt communities the local elevator handles more merchandise, serves more people, extends more credit, eases more hardships and delivers more market information and helpful advice than any other industry.

The country grain dealer cooperates with the farmer, the banker, the lawyer, the editor, the preacher and the teacher. His transformation of new wealth into cash raises the standard of living for all. Thru him the community improves its agriculture, its credits, its schools, its churches, its courts and its spiritual life. No man or institution is more necessary to the welfare of a grain growing community.

Counterblast by Cargill

The special com'ite appointed to investigate suspected violation of the rules of the Chicago Board of Trade reported Nov. 16 that it had found "just ground for suspicion" that an order of the business conduct com'ite had been violated by the Cargill Grain Co., Inc., of Illinois, represented by memberships in the Board held by John H. MacMillan and Edward J. Grimes of Minneapolis and Philip C. Sayles of Chicago.

On the following day, Nov. 17, Mr. MacMillan, president of the corporation, issued the following statement:

"No arbitrary or capricious action of any com'ite of the Chicago Board of Trade can ever force me to sell, regardless of price, property of which I am trustee for my stockholders. We, of course, refused to obey an order of the business conduct com'ite issued on Sept. 23, 1937, which directed us to sell in four hours' time more than a million bushels of corn at whatever the market might be or become because of such forced liquidation. We have no apologies to make for this action. To the contrary, it is high time that certain fundamental issues be decided.

"If representation on the Chicago Board of Trade subjects property to the whim of com'ite action, such representation costs too much. Further, the action of the business conduct com'ite in ordering Cargill, Inc., to liquidate regardless of price while issuing no similar order to shorts to buy in their short commitments was grossly one sided and unfair.

"The com'ite indicated a willingness to allow short sellers to dominate the market and thus reap huge profits at the expense of American corn growers and merchants. In times like the present, when our commodity markets show the absence of constructive buying, the government, the public, and indeed even the Chicago Board of Trade should be fully aware of the importance of discouraging instead of championing predatory short selling.

"Further legislation may be required to make the Chicago Board of Trade deal with the public and all of its members fairly and even-handedly as a public service corporation should, and to prevent it, through the exercise of unauthorized dictatorial powers, from encroaching upon contract and property rights of its members."

The Cargill Grain Co., of Illinois, is a subsidiary of Cargill, Inc., of Minneapolis, a large holder of cash and future corn in various positions required in its operations as a grain merchandiser. In September its holdings of the September future of corn in the Chicago pit were over 6,000,000 bus., altho it is alleged

there was a "gentlemen's agreement" that no member should hold more than 5,000,000 bus. The business conduct com'ite ordered the Cargill Co. to sell the surplus of about 1,100,000 bus., which order the company refused to obey. Later the Board of Trade set a price of \$1.10½ per bushel at which all trades in September corn were closed.

The directors of the Board of Trade will give the representatives of the Cargill Grain Co. a hearing on the charges some time in December.

Rule No. 82 of the Board of Trade reads in part as follows:

"Any member (of the Board of Trade) who fails to appear before the (business conduct) com'ite pursuant to its request . . . or who conducts himself in violation of any order of the com'ite after having been duly notified thereof, shall be charged with an offense against the Association, and if found guilty shall either be expelled or suspended for any specified period by the Board."

Frost Cuts Argentine's Flax Crop

Cables from the Argentine this week have been full of disquieting reports of frost and all grain markets in the United States as well as the Argentine have shown considerable strength as a result. A cable received from our agent yesterday states that the main damage has occurred in the Province of Buenos Aires, and that wheat is undoubtedly hurt more than flax. The same report expresses the opinion that the amount of new crop seed which will be available for export will not be more than 57,000,000 bushels. This figure is roughly, 12,000,000 less than Broomhall's estimate of a few weeks ago.

Exports of flaxseed from River Plate Ports this week were forecast by Broomhall to be 1,575,000 bus. Deducting this amount from the Government's estimate of the remaining exportable surplus, leaves only 1,900,000 bus. of old crop seed still to come forward. Total shipments since Jan. 1 have been 67,223,000 as compared with 52,500,000 for the same period last year.—Archer-Daniels-Midland Co.

Argentina.—Frost took a heavy toll of the growing wheat Nov. 11, the loss being estimated by various interests at 40,000,000 to 50,000,000 bushels. Reports from reliable sources say the frost covered a substantial part of the wheat growing regions in the central and western part of the province of Buenos Aires and in the territory of La Pampa. The United States agricultural at-

tache in Buenos Aires cabled that in a field trip of two hundred miles through the affected areas he found evidence of frost in practically all fields in these regions, the extent of the damage varying from slight in some fields to others completely destroyed. Cromwell advised that a combination of frost, root rot, and yellow stripe rust, which may increase, has reduced probable production in Argentina not to exceed 200,000,000 bushels. It is interesting to note in this connection that as a result of frost experienced early in November, 1924, the Argentine wheat crop was reduced to a total of 190,000 bus. that year as against a production of 247,000,000 bus. the year before. It is also interesting to recall that Chicago May wheat advanced from 1.46 on Nov. 3, 1924, to 2.05½ on January 28, 1925.—Hulburt, Warren & Chandler.

From Abroad

South Africa.—Exports of corn from South Africa have been prohibited, effective Dec. 15, due to drouth conditions.

The Royal Grain Inquiry Commission of Canada is being urged to consider removing the restrictions on Canadian wheat moving thru the United States to the United Kingdom.

Buenos Aires.—The Argentine government has repealed its decree of Oct. 29 prohibiting exports of wheat and flour, now satisfied that this year's harvest will plentifully exceed the nation's internal needs.

Australia's wheat crop is officially estimated at 163,000,000 bus., compared with 150,000,000 harvested in last season. In September the Bureau of Agricultural Economics estimated the crop at 155,000,000 bus.

Ecuador.—Drouth conditions have caused the government of Ecuador to authorize importation of 294,000 bushels of wheat free from the 5% tax, customs, duties, and even from payment of one-half the consular invoice fees.

Mexico City, Mex.—Expropriating all the flour mills in Mexico and setting up a nationwide co-operative of producers and consumers to operate them, is proposed in a bill by Congressman Emilio N. Acosta, introduced in the Mexican Chamber of Deputies.

Buenos Aires, Argentine.—Frosts further damaged the Argentine wheat crop Nov. 10, 11, and 15. It is believed that one-third of the wheat acreage in the Province of Buenos Aires has suffered 20 to 40 per cent losses. The damage has occurred in regions previously unaffected by frost, where good to excellent yields were in prospect.—Bureau of Agricultural Economics.

Courage to refuse to do business at a loss has kept many a country grain dealer in business long after his overbidding competitors have gone into bankruptcy.

U. S. Imports and Exports

EXPORTS of grains from the United States during the three month period July-September, 1937, compared with the like period last year (shown in parentheses) were:

Barley, 5,287,000 bus. (3,147,000); buckwheat, 1,000 bus. (less than 500); corn, 96,000 bus. (217,000); malt, 64,000 bus. (7,000); oats, 1,821,000 bus. (229,000); rice, 73,415,000 lbs. (833,000); rye, 2,045,000 bus. (less than 500); wheat, as grain, 10,276,000 bus. (735,000); wheat, including flour, 15,330,000 bus. (5,470,000); soybeans, 1,064,000 bus. (not classified until this year).

IMPORTS of grains to this country during the same periods were:

Barley, 910,000 bus. (3,506,000); barley malt, 79,934,000 lbs. (85,752,000); corn, 32,663,000 bus. (6,994,000); oats, 3,000 bus. (15,000); rice, 51,302,000 lbs. (29,024,000); rye, none (2,035,000 bus.); wheat, 2,584,000 bus. (18,664,000); flaxseed, 5,325,000 bus. (2,600).

Daily Closing Prices

The daily closing prices for wheat, corn, oats, rye, barley and soybeans for December delivery at the following markets for the past 2 weeks have been as follows:

	Option		Nov.		Nov.		Nov.		Nov.		Nov.		Nov.		Nov.		Nov.		Nov.		Nov.	
	High	Low	10	12	13	15	16	17	18	19	20	22	23	24	25	26	27	28	29	30	31	Dec. 1
Wheat																						
Chicago	131½	84½	89½	92½	91½	89½	89½	94½	91½	90	92½	91½	89½									
Winnipeg	143½	104½	111½	116½	116½	113½	113½	118½	115½	112½	114½	112½	110½									
Liverpool*			122½	125½	125½	120½	120½	122½	119½	119½	118½	119½	117½									
Kansas City	127	81½	85½	90½	89½	86½	87½	92½	89½	87½	91	89½	88½									
Minneapolis	142½	91½	97½	102½	101½	100	99½	103½	100½	98½	100½	99½	97									
Duluth, durum	113½	76½	80½	85½	84	82½	82½	87½	84½	82½	84½	84	82½									
Milwaukee	131½	84½	89½	92½	91½	89½	89½	94½	91½	90½	92½	91½	89½									
Corn																						
Chicago	86½	53	56	55½	54½	53½	53½	55	53½	53½	54½	54½	54½									
Kansas City	88½	57	53½	53½	52½	51½	51½	53½	51½	51½	52½	51½	51½									
Milwaukee	86½	53½	56½	55½	54½	53½	53½	55	53½	53½	54½	54½	54½									
Oats																						
Chicago	42½	27½	30½	30½	30	30½	30½	30½	30½	30½	30½	30½	30½									
Winnipeg	54½	38½	44½	45½	44½	44½	44½	45½	45½	44½	45½	44½	45½									
Minneapolis	38½	26½	27½	27½	27½	27	27	27	27½	27½	27½	27½	27½									
Milwaukee	41½	27½	30½	30½	30	30	30	30½	30½	30½	30½	30½	30½									
Rye																						
Chicago	96½	64½	71½	73½	71½	70½	71½	73½	70½	69½	71	70½	67½									
Minneapolis	91	59½	66½	69½	67½	65½	66½	68½	66½	65½	66½	66½	64									
Winnipeg	106½	67½	74½	77½	76	72½	73½	77½	74½	72½	75½	74½	72½									
Duluth	82½	62½	68	70	69	67	67	70	67½	66	67	67	65									
Barley																						
Minneapolis	52½	42½	45½	46½	46	45½	44½	46	45½	44½	45½	45½	44½									
Winnipeg	70½	52½	57½	59½	59	57½	57½	58½	57½	56½	57	56	56½									
Soybeans																						
Chicago	126	90½	95½	93	92½	91½	92½	94½	92½	92	93	92½	91½									

*At daily current rate of exchange.

Crop Reports

Reports on the acreage, condition and yield of grain and field seeds are always welcome.

Boonville, Ind.—Much of the newly-sown wheat in Warrick county is up and growing rapidly. Ideal weather conditions have prevailed and good rains have fallen from time to time.—W. B. C.

Walla Walla, Wash.—As a result of welcome showers there was considerable increase in seeding in this section last week. *Seeding done during the past few weeks will be greatly benefited by the moisture.—F. K. H.

Bicknell, Ind.—Due to excessive rains farmers did not get to sow all the wheat they planned. Our corn is ripening very poorly, does not dry out, and since it was down badly they have lots of damaged corn.—O. L. Barr Grain Co.

Ford, Kan.—We have had a beautiful fall but it is too dry. Most of the wheat is up but that is all, it has no roots nor top and if we should get a hard freeze before we get moisture, believe at least 50 per cent of the wheat will winter kill.—Security Elevator Co.

Winchester, Ind., Nov. 20.—We never had a wheat crop that went into the winter in any better shape than this one did. Now with this wonderful snow covering the ground, just damp enough so it hasn't drifted, our wheat will certainly come out of it in fine shape.—Goodrich Bros. Co., by P. E. Goodrich, pres.

Kansas City, Mo.—Average protein of 169 cars of wheat tested by the Kansas inspection department during the week ended Nov. 12 was 13.41%; 196 cars tested by the Missouri department averaged 12.92%, making an average for both departments of 13.14% on 365 cars, compared with 13.74 for 189 cars a year ago.

Spokane, Wash., Nov. 19.—During a recent tour contacting members from Spokane to Wenatchee by the way of Wilbur and returning to Spokane by the way of Odessa I found dealers holding from 57 to 80% of the grain delivered them. Moisture conditions and fall grain prospects were as good or better than ever before. Fall seeding is reported to be very large in every fall grain district.—Ted Brasch, sec'y Pacific Northwest Grain Dealers Ass'n.

Springfield, Ill.—Illinois corn yield at 46 bus. per acre is the largest since crop estimating records began in 1866, and the crop is of very good quality. Illinois corn production at 434,746,000 bus. is just about double the 1936 crop of 217,751,000 bus. and is 98,000,000 bus. above the five year (1928-1932) average of 336,378,000 bus. State soybean production for beans is placed at 21,918,000, compared with 17,216,000 bus. in 1935.—A. J. Surratt, agricultural statistician.

Columbus, O.—Nov. 11.—Corn gives promise of 166,005,000 bus., compared with 121,605,000 bus. in 1936 and 129,257,000 bus. the five-year, 1928-32, average. Preliminary estimates indicate a yield of 42.5 bus. per acre, which is almost 6 bus. above average. Corn yields are quite variable this year, especially in the northern third of Ohio, where excessive rains earlier in the season were detrimental. Outside of this northern area, however, yields are averaging quite high.—Glenn S. Ray, agricultural statistician.

Ottawa, Ont., Nov. 13.—A decrease of 5½ million bus. in Canada's wheat crop from the estimate in September was reported by the dominion bureau of statistics, which estimated total yield at 182,505,000 bus., compared with 188,191,000 forecast in September and 229,218,000 harvested in 1936. It is the smallest crop raised since 1914, when production was 161,280,000 bus. Yield in the three prairie provinces is estimated at 159 million bus., compared with the September forecast of 164 million, and 212 million produced in 1936. Total wheat acreage is reported as 25,570,200 acres, against 25,289,000 in 1936, and yield per acre at 7.1 bus., against 9.1. Estimates for all grain crops, with comparisons, were as follows, in bus.: for 1937, wheat, 183,000,000; oats, 274,000,000; barley, 86,000,000; rye, 6,000,000; flax, 1,000,000—in 1936, wheat, 220,000,000; oats, 272,000,000; barley, 72,000,000; rye, 4,000,000; flax, 2,800,000.

Winnipeg, Man., Nov. 18.—The aggregate crop yield, based on the estimated seeded acreage figures issued by the ass'n on Aug. 4, 1937, with returns received from 92 per cent of the country points in the three Prairie Provinces, follows: wheat, 19,497,000 acres, 133,350,700 bus.; durum wheat, 1,455,000 acres, 22,846,900 bus.; oats, 6,973,000 acres, 135,072,200 bus.; barley, 3,366,000 acres, 57,744,600 bus.; rye, 506,000 acres, 3,304,300 bus.; flax, 320,000 acres, 687,900 bus.—The North-West, Grain Dealers' Ass'n. by J. G. Fraser, m'gr.

Topeka, Kan.—Winter wheat showed some improvement in condition immediately following the general rains the middle of October, but since that time rainfall has been below normal and unseasonably warm weather with high winds has tended to further deplete the limited supply of soil moisture. Surveys made in recent weeks indicate a serious deficiency of subsoil moisture prevailing generally thruout the state with the exception of south central counties.—H. L. Collins, agricultural statistician.

Washington, D. C., Nov. 10.—Corn yields are exceeding earlier expectations, particularly in the central and eastern corn belt, and the crop is now estimated at 2,651,000,000 bus., an increase of 89,000,000 bus. over indications a month ago. Record yields are now expected in Illinois and Indiana, and the average yield in the United States, estimated at 27.6 bus. per acre, is expected to be as high as in any year since 1923, a very favorable showing considering that in Nebraska and Kansas, where one-eighth of the acreage was grown, yields were cut half or more by drouth.—U. S. Dept. of Agriculture.

Omaha, Neb.—The November report on crop conditions in this state by the Nebraska Co-operative Crop and Livestock Reporting Service says: "The estimate of corn is 93,106,000 bus. compared with the October 1 estimate of 74,358,000 bus. In parts of western Nebraska and parts of eastern Nebraska, particularly north-eastern, some of the corn is fairly good. Over central and south-central sections, corn is very poor but low spots in fields and protected areas are producing a little corn and most of it is being husked. Irrigated areas have good corn. Probably three-fourths of the estimated production of corn will be husked for grain.

Winchester, Ind., Nov. 13.—Heard of farmers still sowing wheat in Indiana. Think it is getting mighty late, but this wonderful weather, hot during the middle of the day, it might still grow some wheat. Corn gathering is on in a big way and corn is turning out very well. Maybe some of these farmers think that their acres are much shorter than they were last spring when they planted, as we are hearing of 125 bu. to the acre, an occasional 100 bu. and 70 bu. yields are quite common. We have never had such a demand for slat cribs as we have this year, sold more so far than we ever sold in any four years put together before.—Goodrich Bros. Co., P. E. Goodrich, pres.

Oklahoma City, Okla.—Oklahoma crop prospects as of Nov. 1 were the best since the crop year of 1932. Most of October was generally favorable to crop development and harvest. The indicated yield of grain sorghums is 10 bus. per acre, compared with 5 bus. in 1936 and 11.3 bus. the 1923-1932 average. The estimated production is 15,000,000 bus., compared with 6,580,000 bus. last year and 14,505,000 bus. the 5-year average. Both forage and grain prospects were improved by the late summer rains. The dry weather in the Panhandle counties damaged much of the crop beyond recovery, but in other sections excellent yields are expected.—K. D. Blood, C. E. Burkhead, agricultural statistician.

Chilton, Wis., Nov. 16.—A good crop of alfalfa seed was harvested in this section. It is of choice quality, and since it originated in fields that withstood the very difficult conditions that prevailed here last winter, it is sure to be hardy seed. While the acreage harvested was small compared to the normal acreage of alfalfa grown here, the yield of seed was good. This is particularly fortunate, because of the short crop in the northern alfalfa growing states. Hybrid corn grown here for seed is also of excellent quality. Winter wheat and rye acreage planted is normal, and growing conditions are good. Surface moisture conditions are satisfactory and the sub-soil moisture, while not quite up to normal, is enough to provide healthy growth to the winter grain and forage crops.—Knauf & Tesch Co., by W. N. Knauf, pres.

Helena, Mont., Nov. 1.—Despite the drouth damage in eastern Montana, a larger corn production elsewhere in Montana this year has resulted in a total crop of 1,156,000 bus., or more than double the short 1936 crop of 540,000 bus. and not far below the five-year (1928-32) average of 1,401,000 bus. Bean production is now indicated at 240,000 bags, or slightly larger than last month's estimate. This figure compares with 168,000 bags produced in 1936, but is well under the 357,000 bags, the five-year average production. In case of flax, the 1937 crop of 25,000 bus. is the smallest since records began, and compares with 32,000 bus. in 1936 and the 1928-32 average production of 1,149,000 bus.—Jay G. Dumond, agricultural statistician.

Springfield, Ill., Nov. 13.—State soybean production of good quality beans is placed at 21,918,000 bus., compared with 22,135,000 a month ago and 17,216,000 bus. last year. This is the largest crop since the record production of 24,012,000 bus. in 1935. The preliminary acreage for beans this season has been revised to 1,124,000 acres compared with 1,076,000 acres for beans last year, 1,334,000 in 1935, and 724,000 acres in 1934. The Nov. 1st yield per acre has been increased a half bushel to 19.5 bus. and compares with 16 bus. last year, 18 bus. in 1935, and the five-year (1930-34) average yield of 18 bus. Combining and threshing of beans is now well along towards completion, as the first two weeks of November have been mild

Production of Minor Crops

Washington, D. C., Nov. 10.—The U. S. Department of Agriculture reports the production of minor crops as follows:

SOYBEANS (FOR GRAIN)					
Yield Per Acre			Production		
State	1936	1937	Average	1936	Prelim.
	Bushels	Bushels	1928-32	Thousand Bushels	1937
Ohio	15.5	18.5	522	2,092	2,608
Ind.	14.0	17.0	1,982	3,948	5,508
Ill.	16.0	19.5	5,869	17,216	21,918
Mich.	12.0	14.5	43	180	218
Iowa	13.0	18.5	736	2,483	4,052
Mo.	5.0	10.0	800	245	650
Del.	13.0	14.5	175	221	319
Md.	11.5	14.5	59	58	102
Va.	11.0	13.5	218	264	324
N. C.	12.5	13.0	1,187	1,475	1,690
Tenn.	7.0	7.5	150	133	218
Miss.	7.0	8.5	137	462	340
Ark.	7.0	10.0	79	210	350
*U. S.	14.0	17.3	12,491	29,616	38,997
BUCKWHEAT					
Me.	16.0	18.0	207	160	198
N. Y.	18.0	17.0	2,692	2,016	2,278
Pa.	19.5	17.5	2,576	2,418	2,275
Ohio	16.0	16.5	410	320	330
Ind.	13.0	13.5	191	104	162
Ill.	13.5	15.0	60	68	75
Mich.	11.5	14.5	288	172	290
Wis.	10.0	10.0	197	100	140
Minn.	8.3	10.5	479	100	105
Md.	18.0	20.5	120	90	123
Va.	14.0	13.5	171	196	189
W. Va.	15.0	17.5	359	255	350
*U. S.	16.8	16.3	8,277	6,218	6,802
FLAXSEED					
Mich.	5.5	10.0	38	60	70
Minn.	5.3	9.0	6,040	4,235	4,023
Iowa	8.0	10.0	178	80	100
N. Dak.	2.7	4.7	5,944	551	2,110
S. Dak.	2.5	4.2	2,170	132	252
Kans.	4.0	6.0	241	168	276
Mont.	4.0	2.5	1,149	32	25
Calif.	14.0	17.0	588	714
U. S.	5.0	7.1	15,996	5,908	7,634
GRAIN SORGHUMS					
Mo.	6.0	16.0	1,786	1,428	5,712
Nebr.	6.5	8.5	268	884	1,564
Kans.	4.5	8.5	15,987	5,463	12,384
Okla.	5.0	10.0	14,505	6,580	15,000
Tex.	9.5	16.0	55,091	31,711	49,664
N. Mex.	6.5	12.0	4,338	1,950	4,500
Calif.	33.0	28.0	2,276	3,993	3,724
U. S.	8.0	12.6	97,760	55,701	95,492

BEANS (Dry Edible)					
	(Pounds)		Thousand Cwt. Bags		
Me.	880	890	62	70	80
N. Y. ...	600	800	857	852	1,264
Mich. ...	570	960	3,638	2 656	4,694
Mont. ...	1,200	1,200	357	168	240
Idaho ...	1,200	1,320	1,546	1,248	1,610
Wyo.	1,150	1,050	306	460	567
Colo.	380	240	1,232	1,091	806
N. Mex. .	240	300	615	288	525
Calif. ...	1,176	1,267	3,348	4,081	4,864
*U. S. ...	712	835.1	12,181	11,122	14,982
*Includes other states.					

*Includes other states.

and favorable for field work.—A. J. Surratt, Sr., agricultural statistician.

Decatur, Ill., Nov. 20.—Reports indicate a slight decrease in winter wheat acreage for the state. Wheat on farms and in country elevators is negligible. Corn receipts in primary markets and country offerings continued heavy most of the week, with the demand good. Quality of corn is now improving, husking is well along and most of the overflow that growers could not find crib room for on farms has moved to market. At prevailing prices there is a tremendous consumption of corn, which got underway early and will continue all through the winter months. Soy beans about all harvested and the movement also about over. Due to favorable harvesting conditions, the movement this year has been faster than usual. Shipments this season through October were about 2½ times those of last year.—Baldwin Elevator Co.

Burdensome Stocks of Rice

"Burdensome carry-over stocks of rice at the close of the season are again in prospect," the Bureau of Agricultural Economics reports in its annual rice survey.

Supplies of United States rice for 1937-38 exceed those for any other year for which records are available. Supplies of southern rice are reported to be the largest on record, and more than 2,500,000 barrels in excess of the 1936-37 utilization.

Supplies in California also exceed those of any other year, as the result of a record crop and a fairly large carry-over despite special marketing programs designed to increase domestic utilization and exports.

New Corn Grading Higher

The official opening of the corn marketing year Nov. 1 saw the movement from the farms to terminals begin in real earnest. Receipts Nov. 1 were very heavy and have continued large every day since. At the end of the first week the visible supply of corn had increased to 9,179,000 bus., and on Nov. 13 to 14,721,000 bus.

This flood of cash corn pushed the price of December corn from about the same quotation as May to a discount of 3½ cents under.

Jas. A. Noble, chief of the grain sampling and seed inspection department of the Board of Trade states that "Corn is fully matured and very little damaged, the only factor keeping it from grading higher is the large percentage of moisture."

Grading of the new arrivals at Chicago shows a progressive increase in the proportion of higher grades day by day. On Nov. 1 339 cars were graded No. 5, against 51 cars two weeks later; and on Nov. 15 246 cars were graded No. 3, against only 81 cars so graded Nov. 1.

The grading of corn at Chicago during November has been as follows, in carloads:

Nov.	No. 1	No. 2	No. 3	No. 4	No. 5	S. G.
1.....	1	10	81	264	339	129
2.....	0	5	36	103	108	39
3.....	2	32	113	101	95	51
4.....	2	9	61	210	103	38
5.....	1	12	88	205	92	17
6.....	0	8	65	103	64	17
8.....	0	13	146	265	22	18
9.....	1	11	61	105	32	18
10.....	0	6	71	149	60	17
12.....	1	34	191	307	98	14
13.....	3	26	99	107	27	6
15.....	3	36	246	280	51	16
16.....	0	16	85	109	34	8
17.....	1	21	169	176	29	9
18.....	1	29	153	152	34	5
19.....	0	34	122	144	40	2
20.....	1	26	107	140	43	9

At Kansas City the corn arriving is also grading well.

Grades and classes of corn inspected in Kansas City in October were (cars):

	White	Yellow	Mixed
No. 1	1	13	2
No. 2	5	69	8
No. 3	4	234	4
No. 4	5	250	1
No. 5	4	62	1
Sample	16	1	
Total	19	644	17

Grand total—680 cars, of which 340 cars or 50 per cent graded No. 3 or better.

Grain Movement

Reports on the movement of grain from farm to country elevator and movement from interior points are always welcome.

Williamsburg, Ia., Nov. 16.—Just now, grain movement here is small.—W. F. Harris, Harris & Son.

Boonville, Ind.—Farmers in Warrick county are disposed to hold corn for a higher price.—W. B. C.

Eldon, Ia.—Threshing time was a busy season here. During that period we shipped out 70,000 bushels of wheat.—A. D. Hayes & Co., L. G. Gimer, agent.

Carmi, Ill.—Corn, here, has been moving so fast within the past few weeks that other business has temporarily taken second place consideration.—J. W. Stills & Son, by W. A. Stills.

Chilton, Wis.—A large percentage of the barley crop, being too light in weight for malting purposes, is being fed to the livestock on the farms.—Knauf & Tesch Co., by W. N. Knauf, pres.

Portland, Ore., Nov. 15.—Columbia river wheat shipments during the past week totaled 251,999 bus. to United Kingdom and 66,666 bus. to Peru, the Portland Merchants Exchange reported.—F. K. H.

Oakdale, Wash.—Unfavorable wheat prices have caused a slackening of business thruout the Palouse country. Wheat is stacked high at warehouses and farmers are refusing to sell.—F. K. H.

Galveston, Tex.—Wheat receipts and shipments for October, compared to October, 1936, in bushels, follows: 1937, receipts, 3,500,000; shipments, 3,404,540—for 1936, receipts and shipments, none.

Muleshoe, Tex., Nov. 13.—We have the largest crop of grain sorghums grown since 1931. The movement is slow due to the farmers getting their cotton out.—Griffiths Elevator, by Ray Griffiths.

Boonville, Ind.—Otto C. G. Roller, manager of Boonville Mills, reports a fair trade in spite of the low prices paid for farm products. He says chicken feed has been moving. Many farmers in Warrick county have turned to raising poultry, with good results.—W. B. C.

Decatur, Ill., Nov. 13.—Gathering of corn crop progressing rapidly. Growers cribbing all they can find room for. While receipts continue to be large, there is some indication of country marketing diminishing, apparently the big rush to get corn to market is over.—Baldwin Elevator Co.

San Francisco, Cal.—Grain receipts and shipments in October, as compared to October, 1936, in bushels, follows: receipts, 1937, wheat, 164,300; barley, 598,250; oats, 92,500; corn, 10,045; shipments, barley, none; receipts for 1936, wheat, 110,600; barley, 656,375; oats, 42,500; corn, 22,960; shipments, barley, 407,707.—James J. Sullivan, chief inspector.

New Orleans, La.—Receipts and shipments of grain during October, as compared to October, 1936, in bushels, are as follows: receipts, for 1937, wheat, 208,746; corn, 23,316; oats, 74,708—in 1936, wheat, 3,200; corn, 251,322; oats, 7,958; rye, 2,796—shipments, in 1937, wheat, 191,587; corn, 132,720; oats, 22,110—in 1936, wheat, 4,400; corn, 105,178; oats, 15,468; rye, 1,500.—J. M. Wilke, chief inspector.

Duluth, Minn.—The brisk pickup in grain shipments at the year end from here is reflected in a heavy stock reduction. Large cargoes have become common and rapidly cut deeply into elevator holdings. Present stocks are down to 14,440,000 bus., and further withdrawals before the final boat departure are expected. Eastern milling requirements, it is said, will about wipe out the 5,000,000 bus. spring wheat now held here. Only a small boat fleet is expected to winter here. A large number of boats has already gone into winter berths and jumped grain freight rates for late trips. The unload rate on wheat to Buffalo is now quoted 4c per bushel, as against 2 to 2¼c a month ago. Last year at this time, local elevators carried 7,923,000 bus. of Canadian grain in stock, but this year it is quite different, present holdings are only 67,000 bus. of barley.—F. G. C.

Buffalo, N. Y., Nov. 20.—One of the largest grain fleets of the season, 11 vessels with nearly 3,000,000 bus. of grain for unloading, is enroute to Buffalo. Most of the boats are scheduled to arrive this week. Arrival of these vessels will create considerable work at elevators. As a result of the unusual activity and the demand for small hold vessels, grain rates, which jumped from 2½ cents to 3½ cents early this week, have risen again to 4 cents.—G. E. T.

New York, N. Y.—Receipts and shipments of grain during October, as compared to October, 1936, in bushels, follow: wheat, 1937, 2,492,813; corn, 32,000; oats, 85,600; rye, 698,291; barley, 759,051; flaxseed, 84,000; millfeed, in tons, 1,090—shipments, wheat, 2,070,000; rye, 462,000; barley, 690,000; clover seed, 6,276; millfeed, in tons, 2—in 1936, receipts, wheat, 1,938,730; corn, 612,685; oats, 90,175; rye, 8,500; barley, 10,400; flaxseed, 963,200—shipments, wheat, 982,000; clover seed, 1,172.

Ottawa, Ont.—Canadian wheat in store Nov. 5 was reported as 74,244,392 bus., compared with 74,483,913 bus. for the preceding week, and 148,226,026 bus. Nov. 6, 1936. The stocks of 74,244,392 bus. include 17,269,689 bus. of Durum wheat. Canadian wheat in the United States amounted to 2,487,902 bus. For the like week a year ago, Canadian wheat in the United States amounted to 22,579,157 bus. Wheat in rail transit amounted to 4,948,719 bus. Nov. 5, 1937, compared with 7,708,887 bus. last year. The In Transit on the Lakes amounted to 3,465,581 bus., against 6,753,667 bus. last year.—R. H. Coats, L. L. D., dominion statistician.

Fort Williams, Ont., Nov. 12.—A small quantity of U. S. A. wheat has already been imported for milling in Canada and further imports are expected to take place. Substantial quantities of American oats are being received into eastern elevators, considerable amounts being imported for Canadian mills and feed houses, the balance being for distribution to New England states destinations, by rail. From the 1st of July to the end of October, St. Lawrence elevators had received 3,316,568 bus. U. S. A. wheat, 1,710,808 bus. of which were exported overseas in the same period. Eastern elevators had received 4,890,347 bus. of U. S. A. oats by October 31. The acute shortage of supplies of No. 1 hard, Nos. 1 and 2 northern wheat has created a very tight situation in the cash wheat market. High premiums have been and are being paid for these grades. On October 1 the premium for cash No. 1 northern over the October future was 10c per bushel. By the 21st and 22nd it had risen to 25c per bushel. A slight recession followed to 18c on the 30th, but it rose again to 22c by November 5. As inspections to the end of October indicate less than one-half of the new wheat crop, other than durum wheat, is grading No. 1 hard, Nos. 1 and 2 northern, it is obvious the supplies are insufficient to provide for normal home requirements of and the anticipated export demand for these particular grades.—E. A. Ursell, statistician, Board of Grain Commissioners.

Winchester, Ind., Nov. 20.—Corn is coming in good volume and the past two weeks has made a great change in the moisture content. Fresh picked corn is running around 20% to 21%, an occasional car running 24% and we have some cars run as low as 19½%. Hearing complaints in all directions of corn getting hot and sour. One shipper was in today said his boss had loaded 3 cars all graded sour, he had quit buying corn, gone south on a fishing trip. This is a little diverse from the ordinary run, a man taking a good stiff loss then going on a vacation. It is terrific the discount that some of these sour cars brought. Shippers have gotten as little as 10c to 12c a bus. out of their corn. They are not to be pitied, they let the farmers talk them into taking this corn three or four weeks before it was ready. Terminal houses won't handle sour corn at any price. Just dry it for the shippers. One man was in today who shipped a car to one of the terminals, they dried it for him, cost him 10c a cwt. 10,000 lbs. shrinkage and still he had not been able to sell it at any price. We have had only a little corn of this quality. Luckily we were slow in getting our new drier started and kept out of the corn market at all of our stations until we did get ready to run. Now running night and day doing a beautiful job, doubled our capacity over what we have had for the last 20 years. Farmers have plenty of corn, oats and low grade wheat. Of course, they are feeding it wastefully. This great corn crop will probably disappear and have a short tail.—Goodrich Bros. Co.

[Continued to page 453]

Concrete 100,000-bu. Country Elevator

The handsome structure shown in the engraving herewith was erected for the Pratt Equity Exchange to supplement its existing facilities at Pratt, Kan., the county seat of Pratt County in central southern Kansas, a good farming region.

Manager Guy W. Sitton had a 50,000-bu. elevator of wood construction 30 ft. from the new concrete building, on the Rock Island, and 15,000-bu. elevator a half mile south on the Santa Fe, both of which continue in operation, to handle a thriving business in hay, and feed ground and mixed on the premises.

The new elevator comprises four tanks 110 ft. high with seven interstice bins over the work floor. The attached driveway, 12x34 ft., houses an overhead truck lift of the Ehrsam make. The elevator leg having a capacity of 3,500 bus. an hour is driven by a 15-h.p. Fairbanks-Morse Motor. The leg belt is 5-ply, 32-oz., 11 inches wide, carrying 10x6-in. Calumet Cups spaced at 9-in. centers.

Grain loaded out is weighed thru a 10-bu. Richardson Automatic Scale placed in the cupola. All of the spouting as well as the metal of head, legs and boot is 14 and 16-gage steel. All bearings are of the anti-friction type.

Operators who otherwise would have to exert themselves on an ordinary manlift in getting up to the cupola more than 110 ft. high will appreciate the motor drive on the 500-lb., all steel Ehrsam Manlift.

This up-to-date plant was designed and built by Chalmers & Borton.

Canadian Wheat Moves Thru New York

Hope for a revival of the big export movement of Canadian grain thru United States ports to the United Kingdom and the Continent has returned to Buffalo, Albany and New York with duty free acceptance in London of a test shipment of 4,000 bushels of Canadian wheat shipped via New York.

In past good years New York has exported as much as 100,000,000 bus. of Canadian grain, but eastern ports were hard hit by the Ottawa trade pact which restricted to direct shipments duty free entrance of Canadian grain into the United Kingdom. Last year grain exports thru New York dwindled to 20,000,000 bus., all of which moved to the Continent.

Efforts have been made by U. S. port authorities ever since 1933 to have lifted the restrictions imposed by the Ottawa trade pact. The new arrangement provides duty free en-

trance of Canadian grain in the United Kingdom via New York when it is sent to a purchaser, or on "consignment."

The Grain Dealers Friendly Circle

As usual The Circle's friendly group of grain dealers had a luncheon all their own at the Dallas convention of the National Ass'n at which time T. C. Crabbs, Crawfordville, Ind., Sec'y of the Circle, presented the following:

At Milwaukee last year, your Secretary was requested to prepare a history of the Circle.

We have corresponded with the following members who were in the Circle twenty years ago: George Cole, F. A. Derby, E. Bossemeyer, Jr., as well as Mr. T. B. King, formerly of the Hord Grain Company, now with the U. S. Department of Agriculture in Washington, but the memories of these gentlemen failed to give very much authentic information. They all referred to the activities of Mr. George A. Wells, who at that time was connected with the Central Iowa Grain Co. of Des Moines, as well as Secretary of the Iowa Grain Dealers Ass'n. While there is no positive information, everyone seems to think that Mr. Wells might have been one of the organizers, which was probably around 1910 or 1912.

We found in C. R. T. Co.'s files, all of their weekly letters since December, 1917, almost twenty years, which contained some information in regard to the activities of the Circle in more recent years.

The Circle was first made up of strictly country grain shippers with membership limited to some eight or nine, object being to keep each other informed by weekly letters as to crop and market developments in each territory covered. Later they found the need of some direct hook-up with the Eastern consuming section, so Boston and Buffalo distributors were added. The membership has been increased until now the authorized number is twenty-five. We seem, however, to have a total number of twenty-seven members. Would like to give a list of all those who have been members of the Circle but no complete lists are available.

In December, 1917, there were eleven members in good standing: George W. Cole, Bushnell, Ill.; Derby Grain Co., Topeka, Kans.; T. B. Hord Grain Co., Central City, Neb.; Bossemeyer Bros., Superior, Neb.; Central Iowa Grain Co., Des Moines, Ia.; R. E. Jones & Co., Wabasha, Minn.; St. John Grain Co., Worthington, Minn.; McCray Grain Co., Kentland, Ind.; Quinn-Shepherdson Co., Sioux Falls, S. D.; DeWolf & Wells, Spencer, Ia.; Crabbs Reynolds Taylor Co., Crawfordville, Ind.

Our letters occasionally mention names of new members but do not give all of them. C. C. Isely Lumber Co. of Dodge City, Kan., was added in October, 1919, and B. E. Clement, Waco, Tex., in September, 1920. In March, 1921, J. C. Miller of Page, N. D., and Neils Tacklind of Dreyton, N. D., were placed on this list but they never became active. G. P. Sexauer & Son became members in May, 1922, and Goodrich Bros. & Co., in October, 1923. In December, 1923, Oakland City Mill & Elevator Co. became a member; A. S. McDonald of Boston, in December, 1924; and the Davenport Elevator Co. in November, 1926.

In November, 1927, we had twenty-four members: Davenport Elevator Co., Davenport, Ia.; Clement Grain Co., Waco, Tex.; R. E. Jones Co., Wabasha, Minn.; Gillette Grain Co., Nashville, Tenn.; W. J. Edwards Grain Co., St. Louis, Mo.; Western Grain Co., Birmingham, Ala.; Seymour, Wood Co., Buffalo, N. Y.; E. A. Grubbs Grain Co., Greenville, O.; C. C. Isely Lumber Co., Dodge City, Kan.; Goodrich Bros. Hay & Grain Co., Winchester, Ind.; Smith-Murphy Co., Ltd., Winnipeg, Canada; H. I. Baldwin & Co., Decatur, Ill.; Marfield Grain Co., Minneapolis, Minn.; E. W. Crouch, McGregor, Tex.; Geo. W. Cole Grain Co., Peoria, Ill.; Derby Grain Co., Topeka, Kan.; T. B. Hord Grain Co., Central City, Neb.; Bossemeyer Bros., Superior, Neb.; Geo. P. Sexauer & Son, Brookings, S. D.; B. P. St. John & Son, Worthington, Minn.; DeWolf Grain Co., Spencer, Ia.; A. S. McDonald Comm. Co., Boston, Mass.; Bouldin, Thornton Grain Co., Muskogee, Okla.; Crabbs Reynolds Taylor Co., Crawfordville, Ind.

Gordon T. Shaw became a member in De-



100,000 bu. Concrete Elevator of Pratt (Kans.) Equity.

cember, 1927. In February, 1928, Smith-Murphy Co. of Winnipeg was changed to Reliance Grain Co., Ltd. In November, 1929, Kearns Grain & Seed Co., Amarillo, Tex., came with us and the National Elevator Co. of Minneapolis, in December, 1929. The Reliance Grain Co. of Winnipeg resigned in August, 1930, and Mr. A. H. Bevan of Winnipeg was elected to succeed them. Mr. Bevan resigned in September, 1932. Mr. L. D. Godfrey became a member in October, 1933, and transferred to Chicago in March this year. The Reliance Grain Co. was again elected to membership to succeed Mr. Godfrey in the Winnipeg market.

On Oct. 1, 1937, our membership was as follows: Hall Grain Co., Greenville, O.; Geo. W. Cole Grain Co., Peoria, Ill.; Baldwin Elevator Co., Decatur, Ill.; McGregor Milling & Grain Co., McGregor, Tex.; Geo. P. Sexauer & Son, Brookings, S. D.; Derby Grain Co., Topeka, Kan.; T. B. Hord Grain Co., Central City, Neb.; Bouldin-Thornton Grain Co., Muskogee, Okla.; Bosse-meyer Bros., Superior, Neb.; B. P. St. John & Son, Worthington, Minn.; A. S. McDonald Corp., Boston, Mass.; Gordon T. Shaw, Seattle, Wash.; Holmquist Elevator Co., Omaha, Neb.; Kearns Grain & Seed Co., Amarillo, Tex.; National Atlas Elev. Co., Minneapolis, Minn.; Wood Grain Corp., Buffalo, N. Y.; Davenport Elev. Co., Davenport, Ia.; Gillette Grain Co., Nashville, Tenn.; Western Grain Co., Birmingham, Ala.; R. H. Baumgartner, St. Louis, Mo.; Goodrich Bros. Co., Winchester, Ind.; Dodge City Terminal Elev., Dodge City, Kan.; LeRoy D. Godfrey, Chicago, Ill.; Kimball Mill & Elevator, Kimball, Neb.; Wilder Grain Co., Cedar Rapids, Ia.; Reliance Grain Co., Ltd., Winnipeg, Canada; Crabb Reynolds Taylor Co., Crawfordsville, Ind.

One item we find in our letter files of much interest. On March 29, 1919, we wrote:

"Glad to see that our Circle's 'Y' member in France is back on the job again. Congratulations, Mr. Derby! You have done a good work, but let us hope that never again will mankind be called upon to do like service."

In the early years there was no attempt at an annual get-together, depending entirely on the weekly letters for all contact, but as some few of the members were also members of the Grain Dealers National Ass'n, they would drift together at the annual conventions to visit. As the membership of the National grew, it was only natural that all the members of the Circle should finally become members, although no pressure was ever put on any member to join the National Ass'n. For many years now, it has been the custom to have a breakfast, luncheon or dinner some time during the convention and these annual get-togethers have proved to be profitable as well as enjoyable for those in attendance.

While the Circle was organized with the idea of the members writing each other weekly, this has not been strictly followed.

Insurance on Sealed Corn

Insurance on cribbed and sealed corn will all be written and the certificates issued by the local agents in the territory where the corn is stored. With the largest corn crop in recent years, they estimate that total premiums from this coverage would approximate \$600,000.

The rules and rate sent out by the actuarial com'ite are as follows:

1. "Insurance may be written on corn sealed in cribs and warehouses (only while located on farms) under the 1937-38 corn loan plan of the Commodity Credit Corporation as security for loan granted by said Commodity Credit Corporation or lending agencies, under a certificate plan, subject to all the terms and conditions of an open policy.

2. "A rate of 75c annual, for each \$100 of insurance shall be charged covering fire, lightning, tornado and hail. All certificates must be issued for a period of not less than one year.

3. "The above rules and rates are not to apply to specific insurance on corn not pledged under the 1937-38 loan plan of the Commodity Credit Corporation.

4. "All regular rules governing the cancellation of policies apply to these certificates."

Mechanical Pickers Harvesting Iowa's Corn

Mechanical pickers have replaced half the itinerant labor formerly employed in picking Iowa's tremendous corn crop, relieving farmers from some labor and harvest uncertainties, but multiplying the price hazards that follow an overloaded market. Mechanical pickers have put the current corn crop on the market much more rapidly and at an earlier date than heretofore.

Ray Murray, former Iowa sec'y of Agriculture, remarks that five farm implement companies selling pickers in Iowa found it impossible to fill their orders this year. He estimates that 6,000 picking machines are in operation within the state.

A Murray survey shows that southern Iowa counties still employ hand labor, but the farther north one moves the greater is the proportion of corn being picked by machines. Thus, while only 1 per cent of the corn in Ringgold county on the Missouri border, and the nearby Decatur, Appanoose and Monroe counties, is being harvested with mechanical pickers, the volume being harvested mechanically runs up to 70 per cent in O'Brien, Cerro Gordo and Calhoun counties, to 75 per cent in Hancock, and 80 per cent in Wright.

Altho relief roles are still heavily burdened many farmers complain bitterly that it is impossible to hire competent farm labor at a reasonable price. Turning to the mechanical

corn picker is a natural outgrowth that has in turn burdened the markets with unaccustomed heavy receipts of new corn.

Driveway Observations

BY TRAVELER

BAILEY FEED CO. at Atlantic, Ia., may not do an expensive job of advertising, but it gives the farm trade no opportunity to forget.

"We sell the supplements needed to mix with your home grown grains. Bailey Feed Co.," announces a classified advertisement in Atlantic's *News Telegraph*.

Lovers of bargains are apt to comb the classified columns.

* * * * *

AN EASTERN IOWA grain dealer who is understood to have done as much business with itinerant truck merchants from Missouri as any grain dealer, has experienced little difficulty with rubber checks.

"The first time I deal with a trucker probably costs me money," he explains. "I want to check up on him, of course, but telephoning his bank and checking his references I look upon as my own expense.

"One Missouri banker used reverse charges to advise me that a trucker's balance looked untrustworthy. You can bet I was glad to pay that telephone bill.

"The truckers themselves I find a great help in checking up on other truckers. Good truckers, wishing to keep open their sources of supply, will volunteer information about other truckers who have performed tricks with their trucks or their checks. I find an open mind a great help in learning who is and who is not dependable as a buyer of grain.

"But most important I have found my own sources of information in Missouri. One trucking company head with whom I struck up a friendship knew all the fellows running trucks thru a wide section of Missouri. When I phoned him I felt pretty sure of getting dependable information on the character of a trucker wanting to buy grain."

Digging up your own source of information has an advantage over accepting the references of truckers, so long as those sources are kept confidential.

Truck loads of grain will travel several miles farther to reach a grain elevator modernly equipped to weigh and unload them—unless they are purposely looking for a small size scale that will weigh in their favor.

Elevator Built in Quick Time

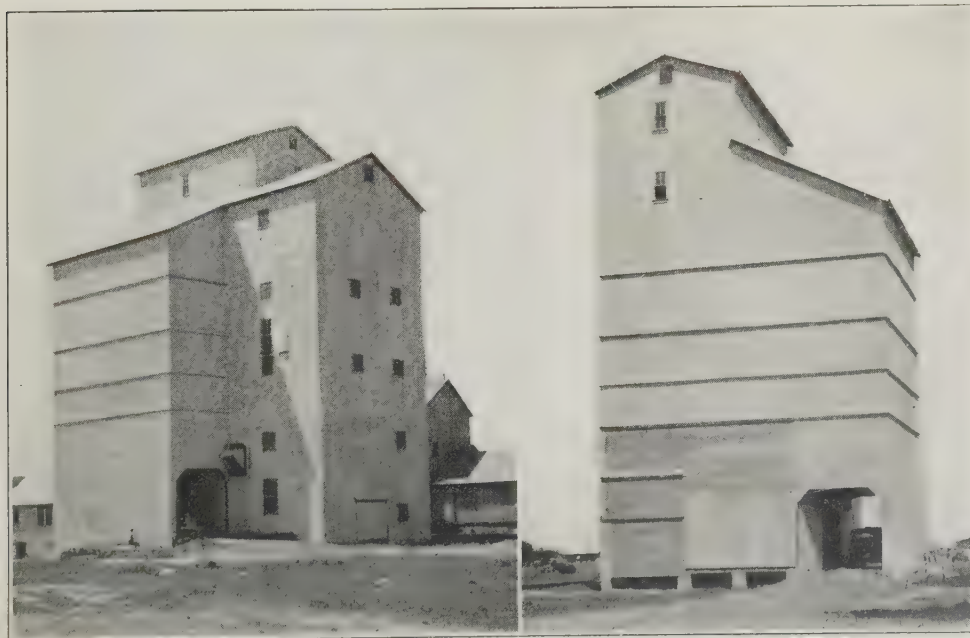
In order to take care of this year's crop the grain elevator of John A. Wuensche at Bishop, Tex., was erected in 13 days, excluding the foundation.

An increasing amount of corn is being grown each year in this southern tip of Texas, where the principal grains handled are milo maize, hygera and kafir corn. Owning and operating the Miracle Feed Mills at Bishop and a mill and elevator at Kingsville Mr. Wuensche decided to fill the long felt need for a grain elevator at Bishop.

The elevator is of stud construction, covered with sheet iron, with a capacity of about 30,000 bus. The building is 30x40 ft., with eleven bins 48 ft. high and a cupola 20x30, 20 ft. high, making it 75 ft. high to cone of roof. The three legs, each of 1,000 bus. per hour capacity, are used for both unloading and loading trucks and cars.

The 300-bu. Hess Drier is a large one for this part of the country. Natural gas fuel heats the air for the drier, and electric motors drive the machinery, which is up-to-date.

The plans and specifications as well as the mechanical equipment were furnished by Harry C. Gill. Gail Tubbs was superintendent of construction and did a very capable job in completing the structure in a short time. The manager of the plant is John Michalk.



30,000-bu. Elevator of John A. Wuensche at Bishop, Tex.

The Laboratory Grain Press

By FREDERIC C. DOBSON

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In previous articles in the Journals (Estimating Quantities of Grain for Warehouse Accounting, beginning July 22, 1936) the writer described a method of estimating quantities of grains in bins, based on the actual rates of compression in various grains when stored in bins of different types and dimensions.

Chapter II reviewed a series of practical experiments, conducted to determine these rates of compression and to isolate their causative factors.

Chapter IV explained the use of data obtained from these experiments in constructing the chart which was furnished to facilitate the determination of the actual rate of compression in any common grain in any bin. Seven curves on the chart represented bins of as many different hydraulic radii, ranging from one foot to 7.7 feet.

When this chart was drawn, it was the writer's intention, as explained in the text, to refine its curves and broaden their range to include other commodities and a greater variety of bin sizes, as data could be obtained from further experiments. Until this can be done, the scope of the chart is limited to the user's ability and accuracy in interpolating and extrapolating to locate values between or beyond those furnished.

Interpolation, altho fairly safe, can lead to inaccurate results, and extrapolation is, at best, hazardous. This fact, together with further experience in the use of the chart in estimating practice, has shown the need for some immediate refinement and broadening, but opportunities to obtain further accurate data have been few.

In attempting to meet this need, the writer investigated the possibility of reproducing, in the laboratory, the conditions extant in large masses of grain in bins. Altho the impracticability of exact reproduction of these conditions on such a small scale was fully realized, it was felt that data obtained from some such reproduction, when properly analyzed and correlated with that obtained from the practical experiments, might prove valuable in meeting the present need. The distinct advantages of this method, such as permitting closer and more accurate study and control of the many factors involved and its almost limitless scope, are apparent.

With this purpose the writer has designed and recently completed the construction of an apparatus called the Laboratory Grain Press, shown in the accompanying engraving. The writer gratefully acknowledges indebtedness to Mr. J. A. Schmitz, Weighmaster, Chicago Board of Trade, for his assistance in the design, to Mr. C. L. Cannon, District Supervisor, and Mr. John Q. Adams, Grain Supervisor, Federal Grain Supervision, for their cooperation in furnishing analyzed samples used in making the tests, and to Mr. George P. Bodnar, Grain Supervisor, U. S. Department of Agriculture, for his collaboration in the analysis of the data obtained.

The Press consists essentially of a piston working vertically in a quart kettle, and suspended from the short end of a 3:1 horizontal beam. A weight tray with a capacity of 210 pounds is suspended from the piston by means of a yoke, surrounding (but entirely free from) the kettle and the base upon which it rests. To the long end of the beam is fixed a reading scale, calibrated both in inches (in units of .025 inch) and in per cent of compressed volume (in units of .25 per cent). A fixed indicator, placed on the trig-loop at the operator's eye-level, is adjustable. A counterweight and balance-ball are provided to permit the beam, yoke and empty weight tray to be adjusted to a perfect balance at the beginning of each test. Moving, and subsequent jarring, of the kettle

is avoided by the use of a movable funnel, built to USGSA standard specifications. The base is mounted on three adjustable leveling-screws, and the trig-loop is equipped with vertical screws, above and below the beam, permitting the beam to be held at any fixed position when adding or removing weights. -

In making a test, the kettle is filled with an analyzed sample of grain and stroked off level. As the kettle is machined to standard specifications, and filled and stroked in the manner prescribed by the USGSA, the sample is, at this point, under the exact conditions prevailing in the official test weight apparatus, in which the compression is considered to be zero. (Obviously, the compressing forces of impact and vertical and lateral pressures actually exist, to a slight degree, even in the test kettle. However, as the rate of compression is expressed as a ratio of volume of grain in a bin to volume of a proportionate amount of grain in the kettle, the compression in the kettle must be considered zero.)

The piston is now lowered until its pressure surface contacts the surface of the grain and the indicator is set at zero on the reading scale. Weight is added to the weight tray in units of 1.5 pounds and the resultant downward movement of the piston is read on the scale and recorded. As the piston pressure surface is machined to exactly 15 square inches, each unit of 1.5 pounds added to the weight tray applies a pressure of one-tenth pound per square inch (or 14.4 pounds per square foot) on the surface of the grain. Weight is added and readings taken until the total weight reaches 210 pounds, equivalent to 14 pounds per square inch or 2016 pounds per square foot pressure. Then the weight is removed, allowing the natural resilience of the compressed grain to push the piston upward, and the point at which it again comes to rest is recorded.

The kettle is then emptied and refilled and the test is repeated. In this second test, as each unit of weight is applied, the bottom of the kettle is vigorously pounded by means of a hammer-lever arrangement working thru an opening in the base. Analysis of the data obtained from previous "practical" experiments indicated that the packing effect or compression in grain in bins is caused by two major factors: lateral and vertical pressures, and impact. Hence, the first test on the Press is intended to simulate the conditions caused by the pressures alone, while this second test is intended to reproduce more nearly the conditions caused by both pressures and impact.

A great number of samples will have to be tested before any usable data can be obtained, but the tests already conducted have shown several interesting facts about the relation of pressures to compression, about the varying degrees of resilience in the several grains, and about the relative effects on compression of impact and pressures.

Plotting the data obtained, on ordinary cross-section paper, using the units of pressure as ordinates (y) and the resultant rates of compression as abscissae (x), has provided graphs very closely approaching parabolic curves. However, in all the tests on wheat conducted to date, a straight line is formed when these same points are plotted on logarithmic graph paper, and it is therefore evident that a definite law of progression is followed.

This law is expressed by the formula: $y = c \cdot x^n$, with c representing the value of y where x equals 1.0, and the exponent, n, being the slope of the line connecting the located points. Thus it becomes possible to determine the exact rate of compression in any bin of any grain in the following manner:

Using Janssen's or Airy's formulae or Lar-

kin's tables, the lateral and vertical pressure at any point in any bin of any grain can be computed. The total pressure against any point is equal to the square root of the sum of the squares of the vertical and lateral pressures at that point. The mean of all of the total pressures throughout the bin, thus computed, provides a value for the term "y" in the above formula, and values for the other symbols, "c" and "n", can be obtained from the data furnished by tests on the press. With these, values once established, the formula can be solved for "x" which is the exact rate applicable to the case.

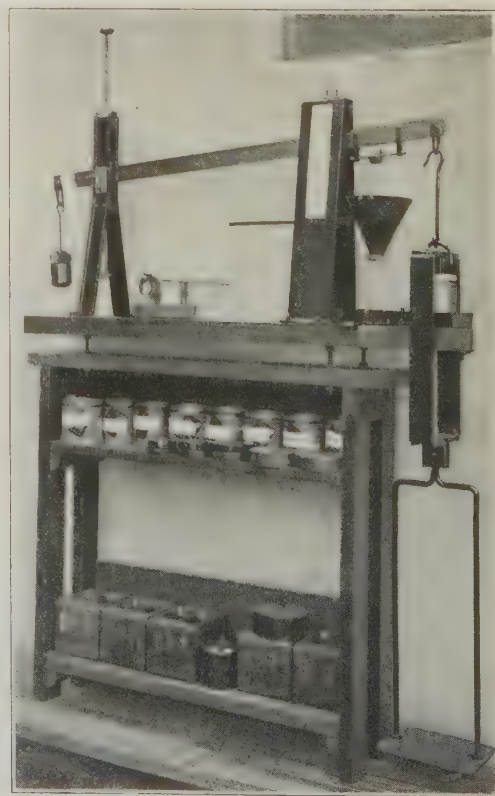
In computing lateral and vertical pressures by any of the accepted engineering formulae, it is necessary to accept values for the several variables involved or to establish better ones by further experiment. The widest variation is noted in values found by different engineers for the important factor "coefficient of friction," even in one particular grain on one bin wall material. It seems quite probable that samples of wheat of different classes might have been used, and possibly samples of varying test weights and moisture content percentages.

In an attempt to establish an accurate, up-to-date table of values for this factor, the writer has constructed a tilt-table similar to the one used by J. A. Jamieson in his experiments, described in "Design of Walls, Bins and Grain Elevators," Milo S. Ketchum, N. Y., 1907, page 269. This tilt-table is used to measure the coefficient of friction of grain on grain, and of grain on concrete, brick, tile, steel and wooden cribbing, of each sample that is tested on the press.

That these coefficients vary with the test weight and moisture content, even within this one class, is shown by the summary of results from ten samples of hard red winter wheat on following page.

To provide data comparable with that resulting from previous "practical" experiments, the results of the compression tests on the Press can be analyzed as follows:

The mean "total pressure" in 22 foot, circular, concrete bins, filled to 100 feet of their depths with grain exactly the same as that represented by each of the samples tested, is



The Laboratory Grain Press.

Coefficients of Friction.

Wheat on

Test weight	Moisture content	Wheat	Concrete	Brick	Tile	Steel	Wooden cribbing
51.8 lbs.	13.2%	0.689	0.450	0.452	0.452	0.387	0.435
52.5	13.1	.687	.449	.452	.452	.386	.435
*55.0	9.1	.625	.430	.435	.442	.364	.394
55.0	9.6	.605	.424	.424	.428	.354	.384
55.6	9.3	.597	.404	.414	.414	.344	.374
57.6	10.3	.581	.384	.387	.387	.338	.361
58.0	10.5	.577	.381	.381	.381	.335	.357
61.8	10.4	.554	.364	.367	.367	.306	.328
62.0	15.5	.573	.384	.387	.387	.322	.356
62.0	14.3	.564	.374	.376	.377	.312	.344

*24% "Thin." All others 0.5% to 9.3% thin. All dockage removed.

computed by Janssen's formula, using the correct coefficients of friction as provided by measurement of the same samples. This pressure is located on the ordinate (y) scale of the logarithmic graph of the test and the resultant compression, in per cent of compressed volume, can be read directly from the abscissae (x) scale, without the necessity of solving the equation.

The following summary of the results of such analyses of the data from tests on eight samples of hard red winter wheat shows, for each sample, the test weight, the moisture content, the mean "total pressure" in the theoretical concrete bin and the resultant compression indicated by the reproduction of that pressure in the Press:

Test weight	Moisture content	Computed mean total pressure lbs. per sq. in.	Compression in sample at this pressure
51.8 lbs.	13.2%	7.53	14.00%
52.5	13.1	7.60	13.30
55.0	9.6	8.22	12.70
55.0	9.1	8.247	9.80*
57.6	10.3	9.183	10.40
58.0	10.5	9.32	10.10
61.8	10.4	10.19	9.90
62.0	14.3	9.945	9.62

*24% "Thin," others from 0.5% to 9.3% thin.

These rates of compression compare favorably with data obtained from previous "practical" experiments involving grain actually weighed into bins and its rates of compression computed, especially when due allowance is made for such factors as differences in classes of wheat, differences in moisture content, and slight differences in the sizes of bins. One lot of 58.7 lb. hard red spring wheat, with a moisture content of 9.8%, stored in 23.5 foot circular, concrete bins to a depth of 89 feet, showed an average P. E. (packing effect or compression) of 9.82%. In a lot of soft red winter wheat, testing 59.5 lbs. and containing 13.7% moisture, the indicated P. E. was 8.87% when stored in bins 21.5 feet by 90 feet. The only data available on hard red winter wheat in bins of this size, (22 feet by 100 feet), showed an average P. E. of 8.84% for 61.57 lb. wheat containing 14.9% moisture.

These comparisons seem to indicate that the conditions existing in large bins are being reproduced rather closely in the Press, at least in these tests on wheat. The results of the compression tests on the Press also indicate, as have all of the "practical" experiments, that when all other factors are equal, the rates of compression vary inversely with the test weights. The clearness of this inverse relationship shown in the foregoing summary becomes more significant when it is noted that a direct relationship exists between the computed mean "total pressures" and the test weights.

Of course in this group of tests "all other factors" were not equal. The factor of moisture content, which undoubtedly exerts considerable influence, varied 5.2%, but the greatest variation in compression seems to have occurred in the sample containing 24% of thin kernels. This sample was graded "scoured" and was tested particularly to afford a comparison with the other 55.0 lb. sample of normal "virgin" wheat of the same moisture content but containing only 9.3% thin kernels.

To avoid confusion in the analysis of data furnished by further tests, and to isolate more

completely the several causative factors, both the moisture content and percentage of thin kernels are now being "controlled" in the preparation of samples for the Press. The selected samples—all of one class and sub-class, affording a spread of at least 10 pounds in test weight—are exposed to the atmosphere until their respective moisture contents have become equalized. All thin kernels are removed from each sample and weighed and an equal proportion is replaced in each one. The exact weight-per-bushel and moisture content is then determined and each sample is placed in an airtight can, ready for its coefficient of friction and compression test.

Results of these tests will be published from time to time as the work progresses.

Hay Drying Is Surveyed

By W. M. HURST, before American Society of Agricultural Engineers at Urbana, Ill.

The American Society of Agricultural Engineers Committee on Crop Drying recently made a survey, thru a questionnaire sent to all known owners or operators of forage-drying plants in the United States. The results of this study, which was made by Lamar M. Kishlar, form the basis for this report.

Questionnaires were sent to 57 owners or operators of forage driers and replies were received from 44 of them, who reported 62 driers in operation in 1936. Of these driers Arkansas has 4, California 7, Florida 2, Indiana 1, Illinois 1, Kansas 4, Louisiana 5, Michigan 2, Minnesota 2, Montana 1, Missouri 1, Nebraska 4, New Jersey 4, New York 3, Ohio 6, Oklahoma 2, Pennsylvania 9, Tennessee 1, Vermont 1, Washington 1, and Wisconsin 1.

The reports show these machines turned out more than 89,000 tons of dried material in 1936. Crops dried included alfalfa, bagasse, corn, clovers, lespedeza, oats, pasture grasses, peas, soybeans, seaweed, sudan grass, timothy, vetch, and wheat. About 75 per cent of the tonnage handled was alfalfa; bagasse made up 18 per cent; and the several other crops, 7 per cent. Six of the driers reported are operated by state and federal agencies in connection with research work. The New Jersey, Vermont, Pennsylvania and Florida Agricultural Experiment Stations each reported one machine and the U. S. Department of Agriculture reported two. With one exception these are factory-made installations. The exception is an experimental unit constructed by the Bureau of Agricultural Engineering which is being used to dry a small acreage of crops on the Iberia Livestock Farm at Jeanerette, Louisiana, primarily for dairy cattle feeding experiments.

Hay driers are at present used commercially only by feed processors and large farming organizations. Approximately 88 per cent of the 1936 production was reported sold, most of it alfalfa in the form of meal. While only a few producers have adopted artificial drying, more and more of them are recognizing its possibilities. Estimating on the basis of the ASAE survey, there were in 1936 possibly 80 plants operating in this country with a combined production of about 100,000 tons. Forage driers can now be purchased from at least six manufacturers.

Soybeans Have a Future

One of the most striking agricultural developments in the United States in recent times is the rapid rise of the soybean, comments the 1937 Department of Agriculture yearbook. In 1907 there were 50,000 acres, in 1935, nearly 5,500,000. In 1920, seed production was 3,000,000 bushels; in 1935, about 40,000,000.

Remarkable progress has been made in the last few years in developing food and industrial uses. Soybean breeding to meet varied cultural, food, and industrial needs is under way.

In spite of extensive investigations, the work of developing this versatile plant to its fullest possibilities is still in its infancy. The plant breeder is faced with complex problems, but careful selection and hybridization are expected to develop varieties of soybeans that



E. F. Johnson, St. Louis, Pres. National Soybean Processors Ass'n.

possess all, or nearly all, the important characteristics desired by oil processors and by manufacturers of food and industrial products.

Right in the middle of development work has been E. F. (Soybean) Johnson of St. Louis, Mo., who was elected pres. of the National Soybean Processors Ass'n last month, succeeding I. C. Bradley, of Taylorville, Ill. Mr. Johnson, now head of Ralston Purina Co.'s soybean department, began his study of soybeans as an undergraduate at Purdue University a good many years ago, using this subject for both his bachelor and master degrees. As proprietor of the Johnson Seed Farms, at Stryker, O., in 1922, he grew the largest acreage of soybeans and varieties in the United States, a total of 650 acres. In his present connection Mr. Johnson is still active in soybean breeding work, especially directed to the development of beans with a high edible oil and a quality protein content. The future looks bright to him. He believes there is a likelihood of soybeans reaching into the human diet more extensively.

"Soy flour is being given more serious consideration as an ingredient in the American diet," he says. "Four fields of expansion are advancing. They are blending with wheat flour in bread, pancakes, and breakfast foods; baby foods; mixing with sausage; and for the diets of folks who must avoid starchy foods. Mixing soy flour with sausage and meat loaves produces an effective and improved binder, and government experts admit soy flour contains more food value than other binders."

No one is surprised to find a grain elevator looking a bit unkept, due to the dust associated with the handling of grain. But the live wire farmer prefers to do business with the elevator that is kept clean, subconsciously having a greater respect for the quality of its service, the dependability of its weights and grades, and the fairness of its quotations.

Parading the Vitamins

By A. R. KEMMERER, Division of Chemistry, Texas Agricultural Experiment Station, before Southern Mixed Feed Manufacturers Ass'n.

Concluded from page 426 of Nov. 10 number.

Vitamin D, often called the sunshine vitamin, is the fat-soluble factor which prevents rickets, or in other words, prevents the bones from becoming soft.

Vitamin D exists in two general forms: vitamin D proper, as found in cod liver oil and other liver oils, and vitamin D₂, which is formed from certain natural substances by exposing them to ultra violet light for a short time. Feeds that have no vitamin D at all can be enriched in this factor by exposure to ultra violet light or to sunshine, which contains ultra violet light.

Vitamin D stands out from other vitamins sharply in the fact that few natural foods contain appreciable amounts of it. Most fish liver oils are extremely rich sources, while egg yolk is relatively good. Butter and milk have slight activity, and other common foods contain only mere traces. Irradiated foods, ultra violet light, and sunshine are very good sources.

All farm animals require vitamin D in some form. Their best source is sunshine, and if they have free access to it, no one need worry about their health as far as vitamin D is concerned.

However, if poultry are kept in buildings away from sunlight, they will need some other good source of vitamin D in their diet, such as cod liver oil, or some other fish oil. According to recent work, chickens kept under these conditions need from 12 to 27 international units of vitamin D in every 100 grams of their feed to grow normally, and have well calcified bones. Laying hens need about 65 units per 100 grams of feed for satisfactory egg production and egg quality, and 135 units to insure maximum hatchability.

For chickens there is considerable variation in the effectiveness of vitamin D from different sources. It has been shown, experimentally, that one rat unit of vitamin D from sea bass oil is 2.5 times as effective for chickens as one rat unit of vitamin D from cod liver oil. Likewise, one rat unit from cod liver oil is at least twenty times as effective as one rat unit from irradiated ergosterol. These differences in effectiveness are eliminated if oils used in poultry feeding are assayed with chickens and not with rats.

As an example of how effective sunshine is as a source of vitamin D, I refer to some work done on New Orleans sunshine. When chickens were exposed to the direct summer sunshine for only two or three minutes daily, and kept indoors the rest of the day, they received all the vitamin D they needed for growth. In the winter, about 16 minutes exposure daily was required for the same effect. In the northern states, chickens require longer exposure to sunshine than they do in the South, because the sun rays they receive have passed through more air, and more of the antirachitic light rays have been filtered out. But even as far north as Pennsylvania, poultry men report that chickens receive enough vitamin D from sunshine for satisfactory performance.

Cattle require less vitamin D than do chickens. Even if they are kept indoors, they are not likely to need any vitamin D added to their diets. The hays and fodders which they eat, although they are very poor sources of vitamin D, will usually take care of their vitamin D requirements.

Even though sunshine will give dairy cows and poultry all the vitamin D they need for their own health, milk and eggs can be increased

in this vitamin by adding large amounts of it to their diets.

Cod liver oil given to a hen may increase the vitamin D content of her eggs 4 to 5 times. Irradiated yeast, which is rich in vitamin D, when fed to a cow, will greatly increase the vitamin D in her milk. From this standpoint, then, under special conditions it may be important to feed poultry and dairy cows extra amounts of vitamin D. It is claimed that one egg, if it is rich in vitamin D, eaten daily, will satisfy the requirements of a human being. Also one quart of milk from dairy cows which have received irradiated yeast will give sufficient vitamin D to a growing child. Milk can also be increased in vitamin D by irradiation with ultra violet light. This is an inexpensive process, and is used quite extensively by northern milk dispensaries. Irradiated milk has about the same potency as milk from cows fed irradiated yeast.

When cod liver oil is added to a feed to increase its vitamin D content, allowance should be made for losses in storage. Vitamin D is usually thought of as being very stable, but experiments done as far back as 1930 by the New York Experiment Station show it to be somewhat unstable. Feeds enriched in vitamin D by the addition of cod liver oil lost approximately one half of their vitamin D potency in 16 weeks' storage at room temperature.

Vitamin D is toxic when too much of it is fed. Large amounts cause harmful calcification in the blood vessels, heart, and other parts of the body. Chickens, rats, rabbits, and humans have all been killed by too much vitamin D. Some writers even claim that the toxic dose is only 5 to 10 times higher than the protective dose.

Cod liver oil has been shown to be toxic for other reasons than that it contains vitamin D. It has been known for many years that cod liver oil, when given to a dairy cow, will decrease the amount of butter fat in her milk. Large amounts of cod liver oil may even kill an animal. Goats fed 0.7 gram of cod liver oil daily per kilogram of live weight have died from its effect in 93 days. This amount of cod liver oil, of course, is above what is ordinarily given animals in practical feeding. The effect of this toxicity is reduced if concentrates of cod liver oil are substituted for plain cod liver oil.

Vitamin E, the fat soluble that prevents sterility, is probably required by all farm animals. However, it is so widely distributed in the feeds which they eat that none of them are likely to ever suffer from a lack of it. Cottonseed oil and cottonseed meal are high in vitamin E.

In conclusion it may well be said that to people interested in commercial feeds only three of the many vitamins are important. Carotene may often be effectively added to poultry feeds and some cow feeds; vitamin D need only be added for chickens which do not receive enough sunshine; and occasionally a poorly devised poultry ration does not contain enough flavin (vitamin G).

Carotene may be furnished by good alfalfa leaf meal or other materials mentioned, vitamin D by fish liver oil or concentrates, and flavin by dried milk, alfalfa or other suitable feeds. There is no need for the use of complicated mixtures to supply the needed vitamins; they can be furnished by the ordinary materials.

Maternal Vitamin A Deficiency in Swine

By FRED HALE, M. S., Texas Exp. Sta., College Station, Tex., before Southern Mixed Feed Mfrs. Assn.

Osborne and Mendel found as early as 1913 that if a certain accessory food substance, later identified as vitamin A, is withheld from the diet, the subject will eventually contract a disease of the eye, variously known as ophthalmia, xerophthalmia, keratomalacia, conjunctivitis, or keratoconjunctivitis. Since this discovery, a vast amount of research has been done to show the effects of vitamin A or its lack upon the health of the individual from birth to maturity and with the health of mature animals and human beings. In all this varied literature there is, however, not a single paper concerning the relation of maternal vitamin A deficiency to embryonic development.

In connection with an investigation on the effects of vitamin A on swine at the Texas Agricultural Experiment Station, a Duroc-Jersey gilt that had been fed a vitamin-A-deficient ration composed of white kafir, cottonseed meal, limestone, and salt, for a period of 160 days before and for the first 30 days after breeding, farrowed in 1932 a litter of eleven pigs, all of which unexpectedly were born without eyeballs, as determined by microscopic examination. Further experiments were immediately initiated to determine the relation between vitamin A and embryonic eye development.

Two gilts were placed on a vitamin-A-deficient ration in an attempt to duplicate this anomaly. At the same time, two other gilts were fed the vitamin-A-deficient ration, plus one per cent of cod-liver oil. These two latter gilts were bred 154 days after they were started on test and farrowed normal litters in March, 1933. One of the gilts fed on the vitamin-A-deficient ration failed to show the symptoms of estrus, while the other one was bred 160 days after she was started on the vitamin-A-deficient ration, but failed to farrow at the end of the normal gestation period. A post-mortem examination indicated the litter had probably perished at an early stage, followed by complete resorption of the fetuses.

In 1933, two additional five-months-old gilts, weighing 102 and 116 pounds respectively, were placed on the vitamin-A-deficient ration. The gilts were self-fed in a dry lot and had access to sunshine so that vitamin D in the ration was not necessary. On the 176th day after starting on feed, one of the gilts was so completely affected by the depletion of vitamin A that she was unable to get up. A two-ounce dose of cod-liver oil was administered and she regained her strength so rapidly that she was able to walk within eight hours following the cod-liver oil treatment. Both gilts were bred to a sire of the Duroc breed on the 190th day after starting on feed. The litter with the eye defects farrowed in 1932 was sired by an Essex male, which is an altogether different breed. Symptoms of vitamin A deficiency in the gilts at the time of breeding were evidenced by their wobbly gait, weaving and crossing of hind legs at the walk, drooping of the ears, and loss of weight. After the gilts were bred, they remained on the vitamin-A-deficient ration for the first 30 days of the gestation period, the time during which it is known that the eye develops in the pig embryo. After the first 30 days of the gestation period had passed, the gilts were given an abundance of vitamin A in the form of cod-liver oil so as to furnish them every opportunity to complete a full gestation period.

On June 8, 1934, both gilts farrowed. The gilt that had gone through the entire 190-day period without vitamin A farrowed a litter of ten pigs. A macroscopic examination showed that all these pigs were born without eyeballs, a situation exactly duplicating that of the litter produced under similar conditions in 1932. The gilt that had received a single dose of the

cod-liver oil two weeks before conception farrowed fourteen pigs. In this litter, macroscopic examination showed various combinations of eye defects; some with no eyes; some with one eye; some with one large and one small eye; but all were blind. Three pigs of this litter, all blind, were raised to maturity on a normal ration. In both litters, various other defects were observed, such as accessory ears, subcutaneous cysts, harelip and misplaced kidneys.

On July 6, 1934, another five-months-old gilt weighing 106 pounds was placed on the vitamin-A-deficient ration and fed under the same conditions as those previously described. She was bred 192 days after starting on test to a Duroc male unrelated to any other sire used in these tests and on May 11, 1935, she farrowed seven pigs, all without eyeballs, as determined macroscopically. Other defects observed in the pigs were: harelip, cleft palates, accessory earlike growths at the base of the ear, malformed hind legs, and a failure of the kidneys to ascend from their embryonic position.

Finally, on August 22, 1935, two other gilts were placed on a vitamin-A-deficient ration and fed under the same conditions as those previously described. Both gilts were bred to a Poland-China male. Gilt No. 307 was bred 170 days and gilt No. 316 was bred 200 days after they were started on the vitamin-A-deficient ration. On June 2, 1936, gilt No. 307 farrowed nine pigs, all with bilateral microphthalmia, as determined macroscopically. Other defects observed in the pigs of these two litters were: congenital otocleisis, cleft palate, harelip, ectopic kidneys, ectopic ovaries, and bilateral cryptorchidism.

Congenital microphthalmia has also been observed by the writer among pigs under farm conditions. In October, 1935, the Texas Station was advised of a litter of pigs that was born blind in June, 1935, on the farm of W. P. McKee of Ralls, Texas. There were fourteen pigs in the litter, all of which were born blind, and the six pigs that were raised were brought to the Station for further study. Mr. McKee stated that no green feed (which contains vitamin A) was available on his farm from March, 1934, until May, 1935. This condition parallels our experimental conditions under which we have produced a total of 59 pigs with congenital blindness.

Another litter of seven pigs was born blind

April 3, 1935, on the farm of R. B. Cable of McLean, Texas, under drouth conditions similar to those at Ralls, Texas. This litter and dam was also purchased by the Texas Station and from matings of blind pigs with blind pigs in these litters, fed rations containing vitamin A and from mother and son matings, only normal pigs were produced. If an hereditary factor had been the cause of this congenital blindness, these matings would have produced some blind pigs, even if vitamin A were present in the ration.

A grain cleaner may be the difference between one elevator's profit and another elevator's loss.

Lubricating Motors

Failure to lubricate and clean the motors is one of the causes for the many recent reports of the burning out of electric motors in elevators and mills.

It has long been recognized that excess grease can cause ball bearings to overheat. This is due to churning of the grease and there is no sure way to determine as to the quantity of grease in the ordinary ball bearing unless it is disassembled for inspection.

However, motor manufacturers are taking steps to eliminate the burning out of bearings due to excess greasing. For instance, the Westinghouse Electric & Manufacturing Co. has eliminated this danger by use of self-cleaning cartridge type ball bearings and an overflow sump into which the excess grease is discharged. The bearing housing is sealed to prevent excess grease from escaping and getting into the motor winding.

The ball bearings are so designed that fresh grease enters the outside edge at the top of the bearing and excess or used grease is discharged at the bottom inner edge to the "overflow sump." The used or excess grease may be readily removed from the overflow sump thru a pipe plug opening.

This bearing construction and overflow sump are shown in the engraving herewith, a cross-section of its application to a Westinghouse totally enclosed type CS squirrel cage motor.

Since adding fresh grease automatically cleans the used grease from the bearings, it is unnecessary to incur the expense of periodically dismantling the motor to clean the bearings. And at the same time the danger of overheating of ball bearings from over-greasing is eliminated.

Production Curtailment Detrimental

The National Grange has vigorously voiced objection to the administration's controlled production theories, excepting only cotton and tobacco.

Meeting at Harrisburg, Pa., for its 71st annual convention, the organization's delegates adopted a resolution stating:

"Drastic curtailment of production or destruction of large quantities of food products in the United States eventually will result in bringing about a condition detrimental to the whole people.

"We believe the problem now facing American agriculture cannot be brought to a satisfactory conclusion by either of these means, but lies in bringing about better distribution systems and increasing the purchasing power of the whole people."

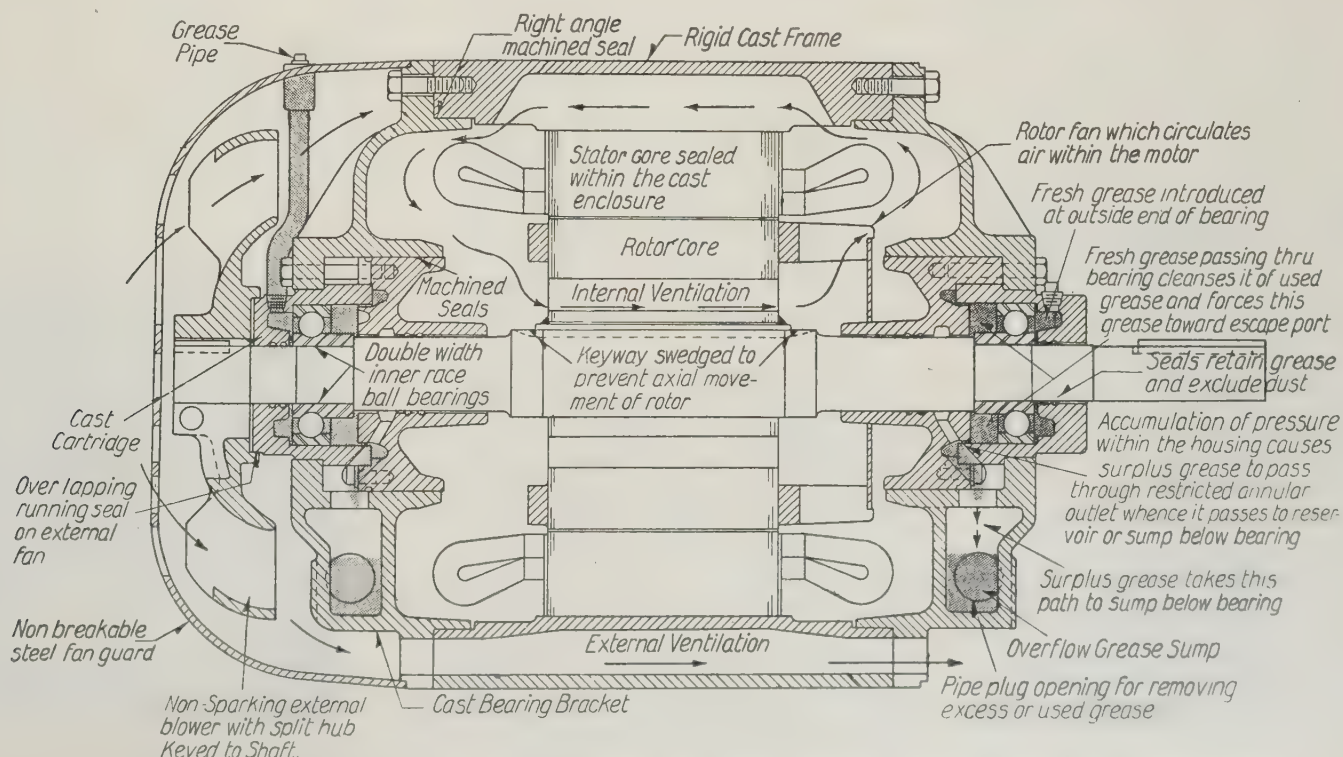
Grain Movement

[Continued from page 447.]

Longview, Wash.—The Longview Grain Elevator, leased by the Continental Grain Co., is enjoying the best year in grain export business in the elevator's history, according to S. A. McLean, manager. The Admiral Melton, the fifth vessel to take wheat to Europe this fall, has just finished loading. Other ships have been the Tanana, Admiral Senn, Wind Rush and Fella. Still others are expected. The Admiral Melton took 1,500 long tons. Grain export business during 1936 was virtually nil.

Chicago, Ill., Nov. 18.—July-September exports from the United States and apparent domestic consumption were below expectancy, leaving October 1 stocks about 235 million bushels larger than a year ago, and more than 300 million bushels above average domestic utilization from October to June, inclusive, in the last three seasons. Even with improvement in exports, a carryover substantially above 200 million bushels appears probable.—Gilbert Gusler, statistician, Millers Nat'l Federation.

Buffalo, N. Y., Nov. 20.—The Barge Canal season for wooden fleets closed quietly in Buffalo this week as the W. E. Hedger Transportation Co. dispatched eastward with 250,000 bus. of corn, loaded at the Canadian Pool elevator. Last year's final rush left 200 barges trapped for the winter in the canal between Buffalo and New York. The season's grain movement from the Buffalo end of the route is expected to be about 8,000,000 bus., a sharp decline from the banner years when 40,000,000 bus. were shipped eastward.—G. E. T.



Cross Section of Ball Bearing of Westinghouse Squirrel Cage Motor Showing Greasing System and Overflow Sump

Books Received

EAST OF MISSISSIPPI RIVER BOOK OF GRAIN RATES, No. 9, containing rates on grain to Chicago from points in Illinois and Indiana, including points in Iowa and Missouri on the west bank of the Mississippi river, has been published by the Transportation Department, Chicago Board of Trade, Chicago, Ill. Price, \$5 per copy, including all future supplements.

FLOUR AND FEEDSTUFFS LAWS, a summary of federal and state requirements, the federal food and drugs act, mixed flour law, state flour laws and state feedstuffs laws, is a handily arranged pamphlet that gives the supervising authority in each state in addition to the summary of the statutes. An up-to-date authority published by the Millers' National Federation, Chicago, Ill.

THE WORLD'S GRANARY, an interesting discussion that includes in the word "granary" the entire grain production and distribution system from the international viewpoint, states: "Grain has ceased to be a national commodity; it is today international in every respect: 1. Grain is grown in every country on earth; and thus is international in production. 2. Grain is the largest item of trade between nations; hence is international in distribution. 3. The base of the diets of all civilized peoples is grain; thus, grain is international in consumption. 4. Because grain values are registered as the result of the meeting of world supply and world demand factors in free world markets, grain is international in price." World grain production totals, world harvest periods, world exports of grain, world price comparisons, are tabulated or charted. Copies can be obtained upon request to the Board of Trade, Chicago.

REPORT OF THE SECRETARY OF AGRICULTURE, 1937, in Sec'y of Agriculture Wallace's letter of transmittal to the President, remarks: "I wish to emphasize certain principles that 5 years of agricultural and industrial recovery has clarified and demonstrated. . . . Federal legislation has given expression both to agricultural and to urban group-solidarity." The report attempts to analyze national economics in the complex relationship between the farmer, labor, and business, before stating the federal department of agriculture's farm objectives, its principles of crop adjustment, and its national conservation program. The report covers land planning, and the land programs under way. Activities of the department in farm crops and livestock, marketing costs, the weather, agricultural chemistry and engineering, forestry, and highways are covered briefly. Published by the United States Government Printing Office, Washington, D. C.

YEARBOOK OF AGRICULTURE, 1937, published by the United States Department of Agriculture, is a volume of encyclopedic dimensions, 1,497 pages thick, reflecting the increased activity that has permeated the Department under the current administration. Yet the vol-

ume contains no statistics (published separately as Agricultural Statistics, 1937). Sec'y Henry A. Wallace's summary of the year in agriculture, as reported to the President, occupies 116 pages about insect plagues, cooperative research, home economics, standardization, agricultural engineering, crop control plans, etc.; the remainder is devoted to lengthy, authoritative papers on plant and animal breeding, covering vegetables, fruits, berries, and miscellaneous forage, and cover crop legumes, including timothy, alfalfa, clover, lespedeza, soybeans, and soybean hybrids. References are mentioned. Cross-indexed. Available from the Superintendent of Documents, Washington, D. C., Price, \$2.

Commodity Price Control.—Attempts to control the prices of raw commodities have usually led to government control of producers. The beginnings of government intervention have customarily taken the form of emergency measures to meet specific temporary difficulties. Ultimately permanent programs for complete government control under international agreements have been developed. These aspects of the changing methods of commodity price control are described in detail in a new study just published. In the case of seven of the nine commodities covered in the Conference Board's study the initial method of control consisted in withholding supplies from the market. In each case there was a temporary increase in price which seemed to indicate successful control. This apparent success, however, attracted increased production. Government aid was then introduced, usually in the form of loans on the stored commodity, in order to maintain prices in the face of this increase in production. This aid, however, further stimulated production by giving seeming assurance of price stability. Continued increase in supplies and inability to liquidate them led ultimately in each instance to curtailment of production, first by voluntary action, and then by governmental bounties or compulsory methods. The final stage was uniformly reached when the control ceased to represent a temporary measure and became a permanent governmental policy. The Conference Board's report includes a separate analysis of national and international control policies in relation to nine important raw commodities—coffee, copper, cotton, rubber, silk, sugar, tea, tin, and wheat. In each case a graphic and statistical comparison of price and stock trends shows the extent to which control has succeeded or failed in stabilizing prices and has stimulated increased production. Journal readers can obtain a copy by addressing National Industrial Conference Board, New York, N. Y.

Protection Against Poison Gas in Grain Bins

By airing out the bins and work floors of grain elevators when the presence of poisonous gases is known or suspected many fatalities can be prevented. In some instances it is not convenient to ventilate, or a bin must be entered immediately to clean it or to rescue a fellow worker, in which case the worker needs the protection afforded by a gas mask of approved design.

Full vision lenses, which permit the wearer to see, read, work, walk and observe surroundings in safety, feature the new full vision gas masks manufactured by the Acme Protection Equipment Co. The lenses are made of shatterproof laminated polished plate glass and afford 90° vertical and 170° lateral vision.

These new canister masks are available in both corrugated tube and snout types. The light weight, all-rubber face piece is fully molded and cured to master face fitting proportions. Head harness connections are strategically located so as to eliminate all forehead pressure points, permitting wearing of hat or helmet without discomfort.

Another feature of this face piece is the elimination of the build-up of used (exhaled) air in the fresh air ducts. Acme meets this by employing one way flap valve ends on the fresh air ducts which close upon exhalation.

Acme full vision gas masks are available with a choice of elastic, all-rubber or permanent non-rubber head harnesses and a wide selection of canisters covering organic vapors such as those generated by heating grain, car-

bon monoxide, carbon dioxide, the chloropierin or hydrocyanic acid gas used in fumigation, and the hexane, naphtha or carbon tetrachloride vapors in soybean oil extraction. The adapted canister contains the ingredients to absorb or neutralize the deleterious gas, rendering innocuous the air breathed.

Some Metals Do Not Respond to Magnets

Frank Nickle, head of the Nickle Engineering Co., marks the use of many alloys in automobile construction that contain a high percentage of nonferrous metals. These alloys of steel and iron with copper, bronze, brass, aluminum and other metals that combine light weight with strength have proven their worth in the construction of automobiles and many farm implements.

When such metal accidentally gets mixed with bulk grain that a farmer brings to the elevator for grinding, it increases the tramp metal hazard, even tho the elevator's feed grinder is protected with a magnetic separator. Many of the alloys are not attracted by the magnetic field.

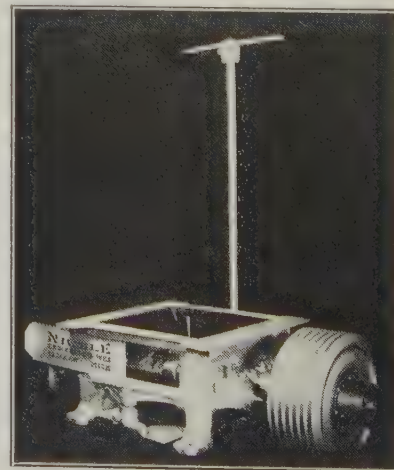
Ordinary pieces of steel and iron like nails, bolts, nuts, washers and such material are effectively prevented from entering the mill thru use of a magnetic separator. An effective means for preventing the entrance into the grinder of larger pieces of non-ferrous metal, containing alloys that are not attracted by magnets, is use of a crusher-feeder ahead of the mill. For the double purpose of protecting its rolls and cutting edges, and keeping larger pieces of metal from entering the mill, the Nickle crusher-feeder has its drive pulley keyed to its shaft with a shear-pin. This pin shears and permits the machine to stop when a piece of metal of dangerous size and strength gets between the rolls and the cutting bar.

The greatest fire and explosion hazard in a hammer mill, believes Mr. Nickle, comes from the entrance of large pieces of tramp metal. A large piece of metal is likely to become impaled on the screen, instead of following the hammers. The mill's hammers, beating against it, quickly brings it to a red heat. A red hot piece of metal may raise the temperature of the feed materials to a dangerous point as they pass thru the screen, and the hot metal, if heated thru the screen, becomes a serious explosion hazard in the light, finely ground, nitrogenous feed materials that pass beyond the hammer mill's screen.

Friction will bring non-ferrous metals to a glowing heat just as quickly as it will ferrous metals. Consequently, says Mr. Nickle, in a day when alloys unattracted by magnets are coming into wide use, hammer mills and elevator properties deserve the additional protection of a crusher-feeder as well as a magnetic separator at the mouth of the grinder.



Full Vision Mask with Hose and Chemical Canister.



A Combination Crusher-Feeder for Hammer Mills.

Grain and Feed Trade News

Reports of new firms, changes, deaths and failures; new elevators, feed mills, improvements, fires, casualties and accidents are solicited.

ARKANSAS

Appleton, Ark.—Fate Henderson and Edd Henderson have put in a new grist mill.

CALIFORNIA

Downey, Cal.—Russell Morris, proprietor of the Downey Feed store, has purchased Howard's Feed store and is now in his new location.

Oakland, Cal.—E. C. Gayman, who recently resigned an executive position with the largest milling company in the west, is heading the new organization of Frizelle-Gayman Co., Inc. This company has been organized for the purpose of acquiring and succeeding to the well established business of Frizelle's, Inc., located in Sonoma county, manufacturers of poultry and dairy feeds for the past 10 years. Mr. Gayman will be joined in the management by S. R. Frizelle and a group of transbay business men.

CANADA

Ville LaSalle, Que.—The Ralston Purina Co. propose erecting a flour mill here.

Holbe, Sask.—The Searle Grain Co.'s elevator and annex were destroyed by fire, Oct. 30. Loss was placed at \$50,000.

Winnipeg, Man.—At a recent annual meeting of the board of directors of the Alberta Pacific Grain Co., H. E. Sellers, Winnipeg, was elected pres.; K. C. Allen, Calgary, general manager; Cecil Lamont, Winnipeg, sec'y; C. J. Bingley, Calgary, treas.

Calgary, Alta.—Annual meeting of the Alberta wheat pool was held here Nov. 23. Proposals for the union of the United Grain Growers', Ltd., and western wheat pools, crop insurance and a plan to change directors' terms of office from one to two years were discussed.

Winnipeg, Man.—James Murray, who relinquished his post as head of the Wheat Board of Canada, has re-established his former connection with the Alberta Pacific Grain Co., Ltd., having been elected to the board of directors. He was formerly general manager of the company.

Ottawa, Ont.—Grain thieves have taken the place of cattle and horse thieves as the most detested criminals on the western plains, according to the annual report of the Royal Canadian Mounted Police. In Alberta, 126 convictions were obtained out of 297 complaints received. Most of the complaints concern small thefts of from 50 to 100 bus.; but in one case in Alberta, theft of 2,759 bus. of wheat and 663 bus. of oats, with a total value of \$2,589, was involved. The case occurred in the Irricana district and the thieves were stealing grain and trucking it to elevators where they sold it under assumed names. The police were able to trace them from the tire marks of the truck they used.

COLORADO

Denver, Colo.—A four-story feed mill containing 15,000 bus. of grain at the George Hanks feed lots was destroyed by fire Nov. 5. The loss was estimated at approximately \$45,000. Barley, corn and oil cake was stored. Three carloads of molasses used in making feeds may be salvaged. In all, a total of \$20,000 worth of feed was in the building; \$6,000 valuation was placed on the building, and \$25,000 on the machinery.

ILLINOIS

Beason, Ill.—The Farmers Grain Co. recently purchased a new 20-ton Soweigh Motor Truck Scale.

Mayview, Ill.—The Federal North Iowa Grain Co.'s east elevator here has been newly painted.—G. H. R.

Ladd, Ill.—A 13-inch, 5-ply Atlas rubber-covered bucket belt is being installed by the Ladd Elevator Co.

Okawville, Ill.—Okawville Farmers Elevator has recently installed a Model L Kelly Duplex Hammer Mill.

Paris, Ill.—H & M Supply Co. has a new Kelly Duplex No. 15½ Cracker Head installed in its corn cracker and grader.

Mason City, Ill.—The machinery of the Mason City Milling Co. was recently overhauled and repairs made at the plant.

North Aurora, Ill.—The North Aurora Elevator Co. has installed a Kewanee overhead electric truck lift in its elevator driveway.

Shabbona, Ill.—W. H. Herrmann Grain Co. recently bought a new 20-ton Soweigh Heavy Duty Motor Truck Scale with a 9x34 ft. platform.

Green Valley, Ill.—The Farmers Grain & Coal Co. is weighing on a new Soweigh scale, recently purchased and installed at the local plant.

St. Joseph, Ill.—Peters Grain Co. recently purchased a new 14-in., 5-ply Atlas Rubber-Covered Elevator Belt, which has been installed at the local plant.

Manteno, Ill.—A. L. Lemenager of Wateska, Ill., has been appointed manager of the Farmers' Elevator Co. as of Nov. 1, replacing Hugh Elliott, who resigned Oct. 1.—G. H. R.

Normandy, Ill.—Atherton Grain Co. has recently completed the building of a new corn crib and installation of a Kewanee Bucket Elevator and Kewanee Overhead Truck Lift.

Seneca, Ill.—The M. J. Hogan Grain Co. recently installed a Clow-Winter Direct Connected Geared Head Drive and a 10-h.p. Allis-Chalmers Motor, supplied by R. R. Howell & Co.

Steward, Ill.—The Steward Grain & Lumber Co. is remodeling the elevator on the C., B. & Q. tracks and will build new legs, new driveway and install two Kewanee Air Lifts with 14-ft. grates.

Seymour, Ill.—A third truck-hoist has been installed in the driveway of the Farmers Elevator. Driveway has been extended 12 ft. to care for the improvement, and the elevator has been painted.—G. H. R.

Shannon, Ill.—The old Graham Bros. elevator, located near the stock yards, is being torn down. The building had not been in use for some time and was razed because it was declared to be a fire hazard.

Yorktown (Tampico, p. o.), Ill.—Rock River Grain & Lumber Co. has just completed a large corn crib. The company has recently installed a Kewanee Bucket Elevator with Kewanee Overhead Truck Lift and a Howell Man Lift.

Granville, Ill.—At a recent meeting of the McNabb Elvtr. Co., Carl Koch, who has been manager of the elevator for a number of years, resigned and Mike Noder was appointed his successor. Mr. Noder entered upon his new duties Nov. 1.

Bondville, Ill.—The Federal North Iowa Grain Co., operators of both elevators here, has taken down the old oat-house and coal shed connected with the west elevator, and the old feed warehouse, connected with the east elevator. Both elevators have been newly painted.—G. H. R.

Ottawa, Ill.—The Bonges Grain & Supply Co. is making general improvements in its local elevator. New machinery will include a Clow-Winter Direct Connected Geared Head Drive, with 7½-h.p. Fairbanks-Morse Motor and a Clow-Winter Full Floating Steel Boot Pulley Unit, all supplied by R. R. Howell & Co.

Springfield, Ill.—The 9-story, million-dollar addition to the Pillsbury flour mills, under construction since Feb. 4, went into operation for the first time Nov. 1. The addition will more than double the output of the local plant. Including a warehouse, feeders, sifters, grinding department and a 1,000-h.p. motor for power in the latter department, the new building is thoroly modern.

Aledo, Ill.—The Rivoli Grain Co. has just completed building a corn crib of cypress lumber, just south of the elevator. The building is 64 ft. long, 12 ft. wide and 10 ft. high, and is capable of holding 3,200 bus. of ear corn.

Catlin, Ill.—The Catlin Grain Co., operators of the only elevator here, has just completed the installation of a "Blue Streak" hammer-beater mill, size No. 30, in a new addition to the elevator, 34x10x12 ft. Mill is driven direct by 30-h.p., 3-phase motor. A 7½-h.p. motor has been installed to operate the drags.—G. H. R.

Stanford, Ill.—James M. Murphy, 78 years old, passed away Nov. 7, following an illness of two weeks of bronchial pneumonia and heart disease. He was a well-known grain man, entering the grain business in 1903. A few years later he formed the Murphy & Ewing Grain Co., which continued until 1931, when it was sold to the Stanford Grain Co.

Ava, Ill.—Grant Young, owner of Young's feed store in Murphysboro, has purchased the Ava Feed & Produce Co. from C. F. Rasche, of Carbondale, who owned and operated the store. Glen Brown is continuing with the new firm, and F. A. Williams, of Murphysboro, is in charge, having replaced Edward Carter, who was in charge under the Rasche ownership.

Secor, Ill.—William Greiner, manager of the grain elevator here for the last 35 years, died suddenly of a heart attack Oct. 31. He was found on the office floor at the elevator by John Woelfle, who had gone there to see him. Mr. Greiner was 68 years old. He had been active in the grain business since early in life, and before coming to Secor, served as manager in Metamora and McDowell elevators.

Carmi, Ill.—J. W. Stills & Son, local elevator owners, have enjoyed an especially active season. This firm is a reorganization of a past firm of the same name. The son in the new firm is a younger brother of the member of the old firm. J. W. Stills is a well-known grain man of 30 years' experience in this section. His son was just recently graduated from college and joined his father. Their elevator has a capacity of 50,000 bus., with 30,000 bus. storage.

Champaign, Ill.—L. W. Porterfield, aged 80 years, former elevator man and grain dealer here for perhaps 15 years, died Nov. 8, after an illness of two months following a stroke suffered Sept. 15. Mr. Porterfield entered the grain business at Fairmont where he conducted an elevator for 10 years, leaving it to go to Kearney, Neb. In Sept. 1892 he returned to Champaign County and purchased the elevator here which he operated until it was destroyed by fire. He rebuilt a larger elevator and also purchased elevators at Rising and Bondville.

Princeville, Ill.—Earl Stoller, 25, owner of the Golden Grain Milling Co., was instantly killed Nov. 6 when a wheat puffing machine he was operating exploded. Hurlled by the terrific pressure, the cast iron lid of the machine struck Mr. Stoller in the chest. His body was discovered lying near the machine by Dennis Taylor, an employee. Examination disclosed all ribs of the left side broken. The puffer was heated by a gas flame and operated under a great pressure. It was during the building up of this pressure that the machine exploded.

CHICAGO NOTES

Memberships in the Board of Trade are selling at \$3,250.

The Board of Trade memberships of Walter A. Hardy and Weston D. Prudden have been posted for transfer to Bernard J. Callahan and Thomas Bennett.

Altho well equipped with Brown-Duvel Moisture Testers the Board of Trade Grain Sampling and Seed Inspection Department last week added two electric moisture meters that are being used by Chief Jas. A. Noble on samples that are suitable to speed up the work of moisture testing the unusually heavy run of new corn.

Directors of the Board of Trade will hold a hearing Dec. 7 on the charges that the rules were violated by the Cargill Grain Co., of Illinois, during the September corn deal, as reported fully elsewhere.

The concrete work on the new 600,000 bus. fire proof elevator, storage tanks and track shed for Albert Schwill & Co. has been completed and machinery is being installed by Jas. Stewart Company. Grain will be taken in by the middle of December and the plant completed this year.

Elected to membership in the Board of Trade were: Thos. Bennett of New York City, a partner of James E. Bennett & Co.; Bernard J. Callahan, an employe of R. N. Meyer & Co.; Hartman Moritz, Natchez, Miss., a correspondent of Fenner & Beane at Natchez and Clarksdale, Miss., and at Alexandria, La.

Secretary Wallace has announced the Commodity Exchange Administration would hold hearings in Room 300 of the Board of Trade, Nov. 30 and Dec. 1 to consider changing rules regulating trading in grain futures. One proposal would prohibit trading in an expiring grain future during the last 10 days of the delivery month, which, it is claimed, would tend to prevent market congestion for "squeezes" that endanger price stability. The other proposal would limit the number of bushels individually traded in during the day.

At the monthly meeting of the Grain Market Analysts Club, held Nov. 18 in the Board of Trade Grill, the speaker of the evening, Herman Steen, secretary of the Millers National Federation, told of "The Milling Problems of To-day." He explained the need of better baked bread to increase flour and wheat consumption, which for many years has been declining, per capita, and pointed out that if the consumers would write to their Congressmen processing taxes on foods could be prevented, especially since there is no real demand from the farmers themselves for a processing tax.

A com'ite of seven was named Nov. 17 by Kenneth S. Templeton, pres. of the Board of Trade, to represent the exchange at the hearings before the Commodity Exchange administration, Nov. 30 to Dec. 1. Purpose of the hearing is to consider the establishment of limits on speculative transactions in grain futures by any individual and to consider the advisability of prohibiting trading in an expiring grain future ten days in advance of the final delivery date. C. D. Sturtevant is chairman of the com'ite. Other members include Barnett Faroll, vice pres. of the Board of Trade; James C. Murray, Lowell Hoit, Arthur F. Lindley, Richard F. Uhlmann, and Harvey S. Austrian.

By vote of members the Board of Trade Nov. 22 adopted the following addition to Rule 222: "NON-MEMBERS' ACCOUNTS.—A non-clearing member may turn over to a clearing member security and future delivery orders of a non-member (free from expense to the clearing member) and receive half of the commissions paid by the non-member for the execution of such orders. The brokerage shall be paid by the clearing member. When instructed, the clearing member may render accounts directly to the non-member and, in this case, one-half the regular brokerage charges shall be paid by the non-clearing member. A non-clearing member may not share in the commissions paid by a non-member firm or corporation in which he has an interest, if such firm or corporation carries margin accounts for customers. Where delivery is taken on future delivery purchases and the grain loaded and shipped, the member turning over the order shall receive the same compensation as on a completed contract for future delivery."

INDIANA

Mongo, Ind.—Mongo Elevator has a new Kelly Duplex Model L Hammer Mill and 40-h.p. motor drive.

Goodland, Ind.—George Belfield, 68, for forty-five years associated with the Goodland Grain Co. here, died recently, due to a heart attack.—W. B. C.

Ossian, Ind.—Franklin Robinson, formerly of Nappanee, has recently become manager of the Ben Levy Grain Co.

Veedersburg, Ind.—The Fountain County Farm Buro has installed a hammer mill with direct connected electric motor.

Gem (Greenfield, p. o.), Ind.—A truck broke thru the driveway floor of the Fred M. Thomas elevator Oct. 14, causing property damage.

Windfall, Ind.—Two concrete tanks, with a capacity for 12,500 bus. of soybeans, are being constructed for the Mitchell Partnership, Inc.

Indianapolis, Ind.—Thomas C. Wishmire, age 52 years, a grain inspector for the Indianapolis Board of Trade for a number of years, died Nov. 7 after a brief illness.—W. B. C.

Bluffton, Ind.—The Bluffton Milling Co. plant was destroyed by fire Nov. 7. The loss is estimated at \$10,000, with partial insurance. Roy Stafford is owner of the mill. Origin of the fire is unknown.

Newburgh, Ind.—Charles W. Brizius, 80, pres. of the Charles W. Brizius Co., milling firm, established more than a half century ago by his late father, died here Nov. 8 after an illness of one week.—W. B. C.

Ambia, Ind.—Walter A. Summers, 71, died Oct. 29 after several weeks' illness of heart trouble. Mr. Summers was formerly in the grain business with his brother for more than 30 years. He retired 10 years ago.

Ft. Wayne, Ind.—N. E. Indiana Hay & Grain Dealers Ass'n held a monthly meeting Nov. 16 at the Anthony Hotel. Dinner at 6:30 preceded the meeting, which was of special interest to hay, grain, feed and seed dealers. Chris Egly is sec'y.

Indianapolis, Ind.—Indiana Grain Dealers Ass'n has received the following applications for membership: Belleville Feed Mills, Warren; W. G. Kimmel, Greentown; Salamonie Feed Mills, Warren; Edward J. Funk & Sons, Kentland.—Fred K. Sales, sec'y.

Tell City, Ind.—The Tell City National Bank is advertising in the Tell City News offering to loan farmers money on this year's corn crop. The bank points out to the farmers it will be real economy to borrow money on the crop than to sell it at the present low price.—W. B. C.

New Harmony, Ind.—George Couch and his son, Clifton, who came here from West Salem, Ind., have organized the Couch Milling Co. They are remodeling the old "Oregon Mill," and within a few weeks it will be in operation, completely modernized, with new electrically powered machinery installed.—W. B. C.

Aurora, Ind.—A two million dollar construction program has been started by the Jos. E. Seagram Sons, Inc., distillers in Lawrenceburg. The construction will include the relocating of the feed grinding mill, still house, cookers, coolers and water softeners. Four or five months will be required to complete the work.

Rushville, Ind.—The Bader & Co. elevator was threatened by fire Oct. 31, when flames were discovered in a pile of corn husks at the rear of the structure. Manager Bart Pierce and a few men succeeded in extinguishing the blaze, the timely discovery of which prevented what could have been a serious fire loss. Small boys set fire to the husks.

IOWA

Pocahontas, Ia.—The Farmers Co-op. Co. has remodeled its office.

West Point, Ia.—Edward C. Walljasper has a new No. 3 Kelly Duplex Burr Mill.

Melbourne, Ia.—H. C. Buck has taken over the Miller elevator here, and is operating it.—A. T.

Grafton, Ia.—Roy Buechele and Raymond Wahl have purchased a new feed mill for the local elevator.

Rockwell, Ia.—The Rockwell City Elvtr. Co. is equipping its driveway with two sets of Howell Sectional Steel Dump Grates.

Cherokee, Ia.—A Howell Daisy Horizontal Revolving Drum Batch Mixer is being installed in the new Steele Bros. Feed Plant here.

Manson, Ia.—Don Fuller, formerly of Blairsburg, has opened the Fuller Feed Store here and will make Manson his permanent home.

Toledo, Ia.—The Central Iowa Grain Co. recently improved its equipment with installation of a new Atlas Rubber-Covered Elevator Belt.

Mondamin, Ia.—The Farmers Elevator of River Sioux, Ia., has merged with the Farmers Co-op. Co. of Mondamin.—Farmers Co-op. Co., S. C. Beebe, manager.

Woodward, Ia.—The Cereal Lactic Co., Inc., has appointed N. A. Winters of Des Moines to formulate and supervise sales and merchandising policies of its "feed concentrate" division.

Sioux City, Ia.—C. E. McDonald, manager of the Terminal Grain Corp., who has been home for about two weeks with an attack of pleurisy, is again reporting to the office.—A. G. T.

Hornick, Ia.—Willis Hindman, formerly second man at the McMaster Elevator here, was appointed manager of the Farmers Elvtr. Co., to succeed W. E. Cose, deceased.—A. T.

Sioux Center, Ia.—The Farmers Co-op. Society is building an elevator here at an estimated cost of \$15,000. It is expected to be ready for use by Jan. 1.—A. T.

Maynard, Ia.—Fire destroyed the Barnes elevator here. Loss was estimated to be about \$4,000, covered by insurance. There were only 100 bus. of oats in the plant at the time.—A. T.

Sioux City, Ia.—Charles Kerr of Kerr Milling Co. just returned home from Rochester, Minn., where he underwent an operation. He is coming along nicely and able to be out again.—A. T.

Adel, Ia.—Vern Danilson of Vern Danilson Co. joined the benedicts on Oct. 29 when he journey'd to Norfolk, Neb. and took upon himself a wife, formerly Miss Cora De Camp of Adel.—A. T.

Griswold, Ia.—The Waters Grain Co., of Atlantic, closed a deal Nov. 10 for the lease of the Hanson & Son elevator and took immediate possession. Henry Hanson was engaged as manager of the local business. C. C. Waters, of Atlantic, is at the head of the Waters Grain Co.

Cedar Rapids, Ia.—C. J. Delp has leased the new feed building being erected at 906 3rd st., S.E., and will conduct a general feed plant for mixing poultry and livestock feed. The building will be 1 story, 50x40, wood ceiling joist, cinder block construction, face brick front, class B roofing, furnace heating, and will cost \$3,000.

Forest City, Ia.—An annex to the Forest City Grist Mill is being constructed to the west of the plant. The structure will be 18x30 ft. W. H. Drewes recently purchased the ground on which the new building is being erected, from N. M. Howes, whose residence stood there for many years. The house was sold by Mr. Drewes to Elmer Anderson, who removed it to his farm.

Newell, Ia.—Due to the conditions of the past two years and the 50c corn loan, Frank Pearce of the Pearce Grain Co., relinquished his lease with W. A. Galbraith & Son of Sac City, who own the elevator. The Galbraiths appointed Franklin Willadsen as manager and the business will now be known as W. A. Galbraith & Son. Mr. Pearce has purchased a new truck and will now operate two trucks and continue to buy and sell grain as the Pearce Grain Co.

Sioux City, Ia.—Burdette Johnson, night attendant at the Consumers Feed Co. plant, was held up early Nov. 17, tied with a rope, and the hold-up men escaped with \$144 in cash from the cash register. The thieves entered the plant and requested chicken feed. When Johnson turned to get the feed, one man drew a revolver and the other tied his hands and feet with rope, then dragged him to the rear of the building, after which they rifled the cash drawer.

Monona, Ia.—All machinery for the Farmers Co-op. Commission Co.'s new elevator is being furnished by R. R. Howell & Co. Included is a 40,000-lb. capacity Soweigh Motor Truck Scale, a Howell Electric Overhead Truck Lift, Howell Sectional Steel Dump Grates, Atlas Rubber-Covered Bucket Belting, with Calumet High Speed Cups; Howell Type H. S. Direct Connected Geared Head Drive, with G. E. Motor, and a Howell Distributing System, with Steel Spouting.

STRATTON GRAIN CO.

MILWAUKEE, WIS.

CHICAGO, ILL. SPRINGFIELD, O. ST. JOSEPH, MO. SCHNEIDER, IND. NEW YORK, N. Y.

MILL FEEDS — FEED PRODUCTS — BY-PRODUCTS

Consignments and Future Orders Solicited

Dallas Center, Ia.—John Burnett, Manager Dallas Center Grain & Coal Co., recently had a narrow escape when acting as fireman during the recent conflagration which took 4 buildings on Main St. He was overcome by smoke and taken out just in time. His chest pains him but is gradually improving.—A. T.

Muscataine, Ia.—Beginning next spring, the Mississippi Valley Grain Co. plans to start the shipment of grain to New Orleans, G. A. Kent, manager of the local plant, stated. Cottonseed is being received at the local mill from the south by barges. Two of the largest barges on the river have already arrived and been unloaded and five more of equal size will arrive here from Mississippi before the close of navigation season. Next year the plant expects to receive a barge of meal about once every four or five days.

River Sioux, Ia.—The Farmers' Elevator (the River Sioux Elvtr. Co.) has consolidated with the Farmers Co-op. Co. of Mondamin. By the terms agreed upon by the two boards of directors, the River Sioux co-operative passes out of existence as a corporation and comes under the ownership and management of the Mondamin company. No change will be made in the officers of the company at the present time, the matter held in abeyance until the annual meeting in July. S. C. Beebe is manager of the Farmers Co-op. Co.

White Cloud (Strahan, p. o.), Ia.—The White Cloud Mill and the mill equipment, patriarch of White Cloud industry, was sold under the hammer Nov. 12 to the American Wrecking Co. of Omaha for \$710 at an administrator's sale, subject to approval of the court. The mill is the property of John Hammack, incompetent. Not for twenty years has it been operated and for many years it has stood some distance from the stream that one time furnished power to turn its wheels, for the course of the Nishna river has been changed for many years.

Dike, Ia.—The Van Ness Construction Co. has been awarded the contract for the new elevator for the Farmers Co-op. Co. The new building will be of cribbed construction, covered with galvanized iron. New, up-to-date equipment will be installed throughout, including a 15-ton truck scale, an attrition mill and a leg equipped with 9x5 Calumet Cups. There will also be a feed warehouse and loading shed in connection to facilitate handling the large feed and grinding business which this firm enjoys. Work will be started immediately and will be rushed through to completion.

Calumet, Ia.—Defective wiring caused a fire that damaged the Calumet elevator early Nov. 7. Timely discovery of the blaze by two local men, Ernest Meyer and Nick Jessen, and prompt and efficient work of Geo. Steen, an employee of the elevator who lives across the street from the structure, made it possible to save from destruction the building and its contents. With flames shooting high in the air, Steen quickly gained entrance to the fire fighting equipment in the elevator and used it advantageously in checking the blaze. Handicapped with lack of water pressure at Calumet, the fire department was fighting the blaze with chemicals when fire departments from Sutherland and Paullina arrived. Combined efforts extinguished the flames before they had made much headway, confining the fire to the elevator structure.

KANSAS

Furley, Kan.—Friesen Grain Co. sustained damages to its plant in a windstorm Nov. 7.

Galesburg, Kan.—The Farmers Union Co-op. Co. has placed an order with R. R. Howell & Co. for a new seed cleaner.

Paola, Kan.—The elevator of the Paola Mill & Elvtr. Co. was slightly damaged by fire of undetermined origin on Nov. 14.

Kansas City, Kan.—Nutrena Mills, Inc., has purchased four lots across the street from its plant on Ewing street, as a site for a new office building. The building will be a two story structure, 80x42 ft.

Dodge City, Kan.—New members recently added to the Kansas Grain, Feed & Seed Dealers' Ass'n's roster are the Goerz Flour Mills Co., Newton, and the Hart Grain & Lumber Co. of Randall, Kan.—J. F. Moyer, sec'y.

Wichita, Kan.—The Valley Feed & Seed Co. has purchased the business of Sizemore's Feeders Service & Supply Co. The company mixes sweet feeds and poultry feeds in addition to handling a general line of feeds and seeds. F. A. Ogren is proprietor.

St. Francis, Kan.—C. L. Stone is now manager of the St. Francis Milling Co., having been appointed to the position following the resignation of H. E. Hoff some time ago.

Sterling, Kan.—The Arnold Milling Co. recently installed a new Fairbanks-Morse 20-ton scale, with a 34-ft. deck and a type-registering beam. The steel beams and framework have been painted with aluminum paint. A concrete cover forms the platform above the scale.

Russell, Kan.—The Shellabarger Mill & Elvtr. Co., whose elevator was destroyed by fire in July, is leaving Russell after doing business here for many years. The office and warehouse were purchased by Albert Milberger, who served as manager the past several months. He will convert the warehouse into a dwelling.

Elk City, Kan.—Shelby and Wayne Gamble have become sole operators of the Farmers Elvtr. Co. They have obtained a lease on the property and will operate it under their personal direction, beginning Nov. 1. The brothers have been employed by the Farmers Elvtr. Co. oil station since its origin some four years ago. They closed up the elevators temporarily and are devoting their time to the oil station.

Centralia, Kan.—The Farmers Union will build an elevator, but the date for starting work on the new structure has not been decided upon. Oct. 2, the Geiger Grain Co. elevator, occupied by the company, was burned. The new building will be erected nearer the railroad siding than the former elevator stood, thus eliminating a long loading chute from the elevator to the cars. It will be modern in every respect, with the latest in machinery, including feed grinding and mixing equipment. The ground where the old elevator stood has already been cleared of the debris from the fire, what was salvaged having been sold at a community sale early this month.

Sawyer, Kan.—Farmers Equity Elvtr. Co.'s new elevator was completed Nov. 8 and the keys turned over to the board of directors and the manager, Harry Highfill. Work started on the structure Aug. 20. The height of the bins in the new building is 110 ft. from the ground; the cupola is 22 ft., making a total height of 132 ft. The total capacity is approximately 100,000 bus. There are 14 bins, four have a capacity each of 15,000 bus.; each of the other ten range from 1,000 to 5,000 bus. All bins are hoppers. The elevating capacity is about 3,500 bus. per hour. It is equipped with a 15 h.p. motor and a Fairbanks automatic car scales; it has an electric manlift; in the driveway is an electric dumping hoist for either long or short trucks. The building is fireproof thru-out, the only lumber in it being the guides for the manlift.

Coffeyville, Kan.—Construction of a molasses feed manufacturing unit at the Nutrena Mills to cost approximately \$25,000 has been started. The new building will be 153x54 ft. Fifty-three feet of the length will be two stories high and the present storeroom on the west part of the mill will be used to house the machinery. A new concrete floor will replace the old one. The 100-ft. structure on the west will be divided and will be used for storage of several tank carloads of raw materials. When the new structure, built of stone, corrugated iron and steel, is completed, the Nutrena mill building will cover an entire block and will range from 1 to 3 stories. The mill was started here three years ago, and since then several additions have been built. Actual operation of the new unit is not expected to get under way until about the first of the year, as 30 days will be needed to equip the new structure following its construction.

KENTUCKY

Kevil, Ky.—Robert Campbell has completed his mill here and will soon be open for business. Fire destroyed his plant a year ago.

MICHIGAN

Belleville, Mich.—The plant of the Belleville Milling Co., Nov. 2, was damaged by wind.

Belding, Mich.—Alfred Chickering, living south of town, recently purchased the Palmer Elevator from Robert Palmer, taking possession Nov. 1. He will continue the business.

Benson, Mich.—The Benson Market Co. is building a modern corn storage warehouse here. All the machinery, including elevating legs, corn drag motors, and overhead electric truck lift, is being supplied by R. R. Howell & Co.

SANTA CLAUS will soon be here—and find a troubled world—war—threats of war—many peoples losing hope. To be sure there's joy in songs the angels sang on the star-lit hills of Bethlehem—but the immediate need is—*cheer, sympathy and love*. These will really help to keep the coming Christmas. And if nation and individual can keep it for a day—*why not always?* It can be done. The Star still shines!

LOWELL HOIT & CO.

Owosso, Mich.—The Brick Elevator is carrying on the same line of business it has for the past six years from its new location, into which it moved in July. Both wholesale and retail departments report gains. Fred F. Cornahr, the owner, is now considering installing a new molasses mixer in the plant.

St. Johns, Mich.—A new mill was recently installed at the E. C. Smith & Son Elevator. The new mill can be used for either beans or grain and is much faster than the one it replaces. Its capacity is 200 bus. of beans or 400 to 500 bus. of grain per hour. A new elevator, built to remove the cleaned grain, is capable of elevating 300 bus. of beans or 500 bus. of grain to the storage bins per hour.

MINNESOTA

Mapleton, Minn.—The Frank Elvtr. Co. is erecting a large corn crib.

Brook Park, Minn.—John Clark has taken over the management of the Brook Park Feed Co.

Welcome, Minn.—Harvin Martwig has purchased the Kopeschka Feed Mill from William Kopeschka and took possession on Nov. 1.

Kinbrae, Minn.—The Kinbrae Grain Co. is installing a Howell Type H. S. Direct Connected Geared Head Drive and 5-h.p. Fairbanks-Morse Motor.

Meriden, Minn.—Calumet High Speed Cups, Howell Spouting and a new Soweigh Motor Truck Scale are being installed at the Meriden Grain Co. plant.

Hitterdal, Minn.—Fire destroyed the Biddick block in which the C. Carlson feed and grain store was located, Nov. 16. Mr. Carlson's loss is estimated to be about \$2,000.

Argyle, Minn.—The Farmers and Merchants Elvtr. Co. has amended its articles of incorporation and has changed its name to the Argyle Co-op. Warehouse Ass'n. Arvid Dahlin is sec'y of the organization.

Mavie, Minn.—The Silverton elevator, owned by the Math Barzen Co., was completely destroyed by fire Nov. 3. The structure was built about 20 years ago and had been operated every year up to the current season.

Duluth, Minn.—Herbert J. Atwood, 71, pres. of the Atwood-Larson Co., and one of the largest independent grain commission operators in the northwest, died Nov. 11 in Battle Creek, Mich., where he had gone for treatment. He has been a member of the Duluth Board of Trade for 42 years, and served as a pres., vice-pres., director or officer since 1912.

Hitterdal, Minn.—The Solum Elvtr. Co. recently installed a Clow-Winter Direct Connected Geared Head Drive and 5-h.p. G. E. Motor, purchased from R. R. Howell & Co.

New Ulm, Minn.—A. F. Anglemeyer has been promoted to the position of general sales manager of the Eagle Roller Mill Co., succeeding J. Frank Armstrong, who will retire after 50 years' activity in the milling business.

Young America, Minn.—The Farmers Co-op. Elvtr. Co., owning elevators here and in Norwood, has decided to liquidate. All assets, including grain and machinery, is being sold. What disposition will be made of the buildings has not yet been decided upon.

Correll, Minn.—The H. C. Nelson Grain Co.'s elevator and stock was destroyed by fire Nov. 9. The structure was new, having been built last spring, and is reported to have been filled to capacity. Contractors are now figuring on a new elevator to replace it. The cause of the fire is undetermined.

Benson, Minn.—The new cob corn elevator being erected by Ray M. Lang Seed & Grain Co. is nearing completion. The new elevator connects with the company's grain elevator and warehouse. Mr. Lang, who also operates elevators at Barry, Hoffman and Moose Island, has established the main office of the company in Benson. Art Lang is the local manager. The new corn elevator has a capacity of 12,000 bus.

Norwood, Minn.—The Farmers Co-op. Elvtr. Co., owning elevators in Norwood and Young America, has voted to liquidate. All the assets, including grain and machinery, will be sold. After all obligations have been paid, the officials will determine whether the business is to continue or whether the buildings will be leased. According to Bruno Schimelpfenig, manager of the local elevator, at least a month will elapse before anything definite is known. In the meantime, Mr. Schimelpfenig will continue in charge here.

Perham, Minn.—Nov. 19 and 20 proved to be gala days here, celebrating the opening of the new elevator and feed mill of the International Elvtr Co., which was recently completed by the T. E. Ibberson Co. The handsome premiums and prizes offered attracted farmers from near and far. An interesting program and the inspection of the new plant made it worthwhile to all interested in the economical handling of grain and the grinding and mixing of feed. Ben and George McCabe and H. K. Chidlaw represented the parent company. G. A. Null is general manager of the new plant, Lester Ringdahl, grain buyer and assistant manager and W. H. Cook, manager of feed sales.

Duluth, Minn.—Arthur M. Prime, 77, formerly a member of the Duluth Board of Trade and barley expert connected with the Cargill Commission Co. died here Nov. 4. Funeral services were largely attended by Duluth and Minneapolis grain men. Interment was in Chicago.—F. G. C.

Traverse, Minn.—The Farmers Elvtr. Co.'s new elevator, built to replace the one destroyed by fire this summer, is practically completed and ready for operation. The new building is 24x32 ft. and 82 ft. high. The office takes up an additional 12x24 ft. space and the driveway is 15x56 ft. The total capacity of the new elevator is approximately 30,000 bus. The foundation of the old building was enlarged and the new structure stands on the site of the old one. The wooden building will be covered with sheet iron. A new 20-ton Howe Scale has been installed in the elevator as part of the new modern equipment now placed there. The new equipment for loading grain into cars will make it possible to load them in 50 minutes, about half the time required with the old machinery.

St. Cloud, Minn.—The new combination grain elevator and feed manufacturing mill for the Farm Service Co. has been completed. R. C. Steele is manager of the company. The mill is equipped to manufacture all kinds of commercial feeds, and do custom grinding and mixing. The main building is 24x27 ft. on the ground, having a maltese cross work floor about 60 ft. high. This building is supported with a reinforced concrete slab, and has a basement over the entire surface in which has been installed the handling and processing machinery. In addition to the main building, there is a driveway containing a 20-ton, 26-ft. dump scale and receiving dump. On the opposite side of the building is a lean-to for storage purposes and dust room. In addition to the main elevator leg there are a number of other legs for elevating and distributing the grain and by-products of various machines.

MISSOURI

St. Joseph, Mo.—George F. Stewart, formerly of Kansas City, has taken up residence here and is engaged in the grain business in St. Joseph.

St. Louis, Mo.—Walter J. Krings, sec'y of the St. Louis Merchants Exchange, and Miss Alice C. Reardon of Webster Groves, Mo., were married Nov. 6.

Norborne, Mo.—William J. Allgaier, of St. Joseph, will be the active manager of the elevator here, recently purchased by W. G. Williams of Hardin.

Higginsville, Mo.—New members recently added to the Missouri Grain Dealers & Millers Ass'n roster are: Unionville Produce, Unionville; Arnold Elvtr. Co., Surmer; Farmers Co-op. Ass'n, Spickard; Grant City Produce Co., Grant City; Cameron Co-op. Elvtr. Ass'n, Cameron, Mo.

Springfield, Mo.—A new concrete warehouse 130 ft. long will be built to adjoin the north side of the M. F. A. Milling Co.'s mill proper; a smaller one of sheet iron will go up on the east side. When completed the mill will have a 217½-ft. loading dock. The improvements will cost \$30,000 and Chapman & Bramer are the contractors.

Chillicothe, Mo.—The new 23,000-bus. elevator and storage for the Henderson Produce Co., which has been under construction for the past several months, has been completed. First grain received there on Nov. 3. The elevator is located at the Producers Produce Co. plant, which Henderson's bought from the United States Government in June of this year. The company also has plants at Laclede and Monroe City. The manufacture of feed has been carried on in the Scruby elevator for the past 5½ years, but all grain buying and feed manufacturing will be done at the new location from now on. New milling machinery has been added, giving a daily capacity of 5 cars.

St. Louis, Mo.—Claiming its presence is a menace to safe flying, a movement is on foot to secure the removal of the Florissant Valley Co-op. Elvtr. Ass'n's 62 ft. grain elevator, located just off the Lambert-St. Louis Municipal Airport property. The St. Louis Municipal Airport Commission has named a committee to negotiate with the owners of the elevator with a view to acquiring it and removing it. Congressman C. Arthur Anderson, member of the House Military Affairs Committee at Washington, stated he would endeavor to interest the Department of Commerce in removing the obstruction, and failing in that, will introduce a bill in congress for federal purchase of the elevator. F. E. Osthoff, pres. of the elevator company, stated he would be agreeable to any suggestion the city might make, and that he believed the board of directors would vote to move "if the city meets our price."

KANSAS CITY LETTER

The Mid-Continent Grain Co. of Kansas City sustained a use and occupancy loss on Sept. 11.

Omar J. Stevens of the Uhlmann Grain Co. is an applicant for membership in the Kansas City Board of Trade on transfer from George F. Stewart, who recently moved to St. Joseph, where he is in the grain business. The price was \$5,000 net to the seller, down \$1,000 from the last sale of a membership.

C. Fred Aylsworth, aged 59, for 35 years connected with the Kansas City grain trade, died Nov. 9 from a heart attack soon after he left the Board of Trade building. Mr. Aylsworth had recently been employed by Goffe & Carkener, Inc., and previously had operated his own business. At one time he was connected with the Midland Elvtr. Co. and the Denton-Kuhn Grain Co., both of which are no longer in business. A brother, George, is manager of the Kellogg Grain & Commission Co. here.

MONTANA

Bozeman, Mont.—The Loren Marshall and Lyle Wood partnership, doing business as the Dutch Mill, has been dissolved. Mr. Marshall has purchased the interest of Mr. Wood and will operate the business as sole owner.

Cascade, Mont.—The Cascade Milling & Elvtr. Co., one of the oldest and largest institutions of the community, has voted to liquidate. At a special meeting of the stockholders, held recently, this action was determined upon. The local storage capacity of the company is 200,000 bus. A buyer of the plant for operation is being sought.

Whitehall, Mont.—The Egger Feed, Seed and Grain division of the Swiss Creamery is contemplating the erection of a grain elevator to adjoin the west end of the new warehouse now nearing completion. The warehouse, 58x78 ft., will have full basement to house heating plant and garage, with the main floor for machinery display and to store feed and seed grains. A scale will be placed in front of the main building. The N. P. railway company has completed a siding track to the rear of the new structure. The building is located directly across No. 10 highway from the Swiss Creamery.

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NEBRASKA

Gering, Neb.—A Clow-Winter Direct Connected Geared Head Drive and motor is being installed in the John R. Jirdon elevator.

Gothenburg, Neb.—Ed. Kunze, Olbin elevator manager, narrowly escaped serious injury when a shotgun he was carrying while duck hunting recently, exploded in his hand, tearing off the tip of one of his fingers.

Springview, Neb.—The Springview Flour & Grain Co. has recently installed an 80-h.p. generating unit and repaired the plant's older engines. This addition will more than double the generating capacity of the plant.

Tilden, Neb.—W. H. Westphal, manager of the Updike Grain Co., moved his family here from Seward early this month. Mr. Westphal has been in Tilden since the middle of July, but was waiting until the title of the elevator property was definitely settled before bringing his family here.

Lincoln, Neb.—W. H. Ferguson, 81, prominent Nebraska grain dealer, died at his home in Lincoln on Nov. 13. He entered the grain business at Waco in 1879. Later he moved to Hastings, where he developed the business until it included about 70 elevators, including terminals at Lincoln and St. Joseph.

Wahoo, Neb.—The \$15,000 stockyards, elevator and sale barns of Risk & Johnson were sold at a referee's sale at the court house recently. There were no purchasers for the property and no interest was taken. Attorney Clyde Worral bid in the property for \$3,000. Timm & Schulz had a lease on the elevator property for a time. The proceeds of the sale will be divided between Mr. Johnson and the bankrupt court.

Swanton, Neb.—The F. J. Sukovaty grain elevator and 4,300 bus. of wheat were burned early Nov. 9, and a brisk wind, blowing the burning embers, endangered the whole town. Firemen from Wilber assisting the local firemen, prevented the office east of the elevator and other buildings from burning. A Burlington grain car near by was destroyed. Spontaneous combustion is believed to have caused the fire. The loss is estimated to be about \$7,000.

Elm Creek, Neb.—The Western Alfalfa Meal Co. plant has finished cutting and, except for regrounding a quantity of the meal and some mixing and resacking, the work is done for the season. The mill cut what totaled about 4,000 acres, ground 3,100 tons of meal; when running to capacity employed from 40 to 50 men with both shifts, and had an average payroll of \$4,500 per month. This fall and early spring will be used for repairing and rebuilding the plant, and it is hoped, expanding. The stockholders will hold their meeting in December, when the question of expansion will be considered, and if agreed upon, plans will be formulated.

OMAHA LETTER

Omaha, Neb.—The C. M. St. P. & P. Railroad Co. is having an employee's belt elevator installed in its elevator in South Omaha. The plant is leased by the Updike Grain Corp. The elevator is being installed by the Van Ness Construction Co.

Omaha, Neb.—Four new directors have been elected by the Omaha Grain Exchange. They are W. T. Burns, J. H. Weaver and J. H. Wright, Jr., for three-year terms, and R. M. Scouler for one year. The other directors are F. C. Bell, B. O. Holmquist, J. A. Linderholm, J. T. Buchanan and J. L. Welsh. The directors met Nov. 16 and chose as pres. to succeed J. H. Wright, Jr., J. H. Weaver of the Nebraska Consolidated Mills, the first representative of the milling industry to be elected pres. of the Exchange. Other officers elected were J. L. Welsh, vice pres.; B. O. Holmquist, vice pres., and F. C. Bell, treas. Frank P. Manchester, who has been sec'y of the exchange for 28 years, will continue in that office.

Omaha, Neb.—The Bruning Mills have established a store and warehouse here, known as the South Omaha Feed & Flour Co. Frank Johnson of Bruning is Omaha manager.

NEW JERSEY

Belleville, N. J.—The National Grain Yeast Corp. won an important victory in its five-year defense against patent infringement charges brought by Standard Brands, Inc., New York City, Oct. 29. United States Judge Guy L. Fake ruled that the defendant had not infringed an American patent in the making of a baker's yeast and that four German patents, which Standard charged had been infringed, were invalid.

NEW YORK

Penn Yan, N. Y.—Birkett Mills has added a Howell Motor Driven Ceresan Treater to its plant equipment.

New York, N. Y.—Farmers Feed Co. recently bought 18 lots adjacent to its present site at a cost of \$41,000.

Potsdam, N. Y.—On Oct. 30 fire caused by spontaneous combustion in stored hay slightly damaged the property of the Potsdam Feed & Coal Co., Inc.

Geneva, N. Y.—The Finger Lakes and Hudson Valley Milling Co., who recently took over the C. C. Davidson milling property here, has rebuilt the plant and installed new machinery.

Tonawanda, N. Y.—The Eastern States Milling Co. has filed with the Town of Tonawanda board of trustees an application for a building permit to construct a \$40,000 addition to its co-op. mill and grain elevator here.

New York, N. Y.—The Produce Exchange has elected Harris B. Fisher, Jr., of Dyer, Hudson & Co., and Harold M. Leinbach of the Oberaldo Finance Corp., Reading, Pa., to regular membership. Otto May has been elected to associate membership.

Buffalo, N. Y.—Otto Tantzler, pres. of Feed Supplies, Inc., has recently received incorporation papers for the company. The capital stock is \$10,000. Other incorporators are Harold J. Tillou, of Buffalo, and Alice R. Buchardt, North Tonawanda.

Buffalo, N. Y.—John Seymour, oldest living member of the Exchange, celebrated his 80th birthday anniversary Nov. 6. Members of the exchange assisted in commemorating the occasion. The Exchange floor was decorated with flags and banners and many gifts were presented him. In spite of his advanced years, Mr. Seymour is still hale and hearty. For many years he has been connected with the cash and brokerage grain business in Buffalo.

Troy, N. Y.—A million bu. grain elevator for Troy is one of the possible developments which would follow the approval of a 27-ft. channel depth in the Hudson river here, it was learned here early this month, when the Troy Chamber of Commerce called an important meeting to consider the project. Officials of the Finger Lakes & Hudson Flour Mills, Inc., stated that its parent company, the Continental Grain Co., would consider building an elevator here as soon as the 27-ft. river channel is approved. Michael Freeman is general manager of the company here.

Buffalo, N. Y.—The Buffalo grain elevator industry is watching closely negotiations between the United States and Canada for extension of its reciprocal trade treaty. Among the questions being considered is the 6 cent preferential rate now charged on Canadian grain shipped through Buffalo or New York. This preferential has dealt a body blow to the Buffalo grain handling industry and its removal would be a great boon to the industry here, stimulating a marked revival in the movement of Dominion grain through the city. While some shipments have moved through American ports to Great Britain without paying the preferential tax, the matter has never been definitely settled.—G. E. T.

NORTH DAKOTA

Almont, N. D.—The Minnekota Elevator has been closed for the season. Manager F. L. Atkinson has been transferred to Sutton.

Thompson, N. D.—The National-Atlas Elvtr. Co. has recently installed two sets of Howell Sectional Steel Dump Grates in the Thompson plant.

Hensel, N. D.—The National-Atlas Elvtr. Co. is equipping its local plant with a Clow-Winter Direct Connected Geared Head Drive and a 7½-h.p. G.E. Motor.

Minot, N. D.—George W. Riebe, aged 60 years, engaged in the grain business locally and in Minneapolis for the past 35 years, passed away at his home here Nov. 12.

Burnstad, N. D.—Present plans are to rebuild one of the Logan Grain Co. elevators that was destroyed by fire Oct. 15, a report of which was given in the Oct. 27 issue of the Journals.

Fullerton, N. D.—The Minnekota Elevator has been closed for the season. A. T. Bakkegard, who was the manager, has accepted a position with the Standard Oil Co. at Cayuga, N. D.

Anselm, N. D.—Fire destroyed the Farmers elevator at Anselm Nov. 5. The loss is estimated to be about \$40,000. The elevator contained 20,000 bus. of grain. Henry Krueger is the manager.

Minnewaukon, N. D.—A feed mill at the Farmers Elevator here was destroyed. Plates which had been recently put in the machine were thought to have been faulty and shattered the mill.

Grand Forks, N. D.—F. F. Burchard has been named by A. J. Scott, state mill manager, as successor to W. H. Stokes, sales manager at the state mill, who resigned recently. Mr. Stokes accepted a position with Kelly-Erickson Co. of Omaha and will take up his new duties Dec. 1, at which time Mr. Burchard will assume his new position.

Sioux Falls, N. D.—Prof. Paul Q. Card, representative of the specialties division of the Archer-Daniels-Midland Co., addressed a special meeting of interested feed men, poultry men and farmers on the subject of feeding and the importance of vitamin "E" in feeds at the chamber of commerce, Nov. 15. The session was held under the auspices of the W. Z. Sharp Elvtr. Co.

Fargo, N. D.—The North Dakota Farmers Grain Dealers Ass'n will hold its convention Feb. 1, 2 and 3 in Fargo. An interesting program is being arranged. New members admitted to membership during October are: Farmers Elvtr. Co., Calvin; O. J. Sundeen Elvtr., Doyon; Folsom Grain & Potato Co., Hoople; A. C. Blackstad, Grafton; Grain Growers Co-op. Elvtr. Co., Minto; Nash Grain & Trading Co., Nash, N. D.

OHIO

Nutwood, O.—Guy Powers has installed a 20-h.p. feed mill in his plant.

South Charleston, O.—Dewey Bros. Co.'s plant was damaged Oct. 19 by wind.

Ansonia, O.—The Ansonia Grain Co.'s plant was damaged in a windstorm Oct. 19.

Mansfield, O.—A Sidney Sheller has been installed at the local Farm Bureau Co-op. Ass'n's plant.

Oxford, O.—W. Finfrock of Hamilton will open a feed store here. George Stout will be associated with him.

Thurston, O.—The Thurston Elevator Co. recently installed a Howell Duplex Safety Man Lift in its local plant.

Creston, O.—The Plank Elevator recently installed a molasses agitator and car-load molasses tank at its local plant.

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Luckey, O.—Luckey Farmers Exch. Ass'n has a new No. 2 one-ton Vertical Feed Mixer with motor drive. It is a Kelly Duplex.

Circleville, O.—Pickaway Grain Co. is now using the large boot sheller recently purchased from the Sidney Grain Mach'y Co.

Washington, C. H., O.—Fayette County Producers Ass'n has just recently installed a No. 2 one-ton Kelly Duplex Feed Mixer with motor drive.

Brookville, O.—Emmet and Elmer Loy are operating their new grain drier 24 hours a day, handling many thousand bushels of grain since Oct. 9.

Wadsworth, O.—We expect to make some improvements on our local plant in the immediate future. We also have a branch at Orrville.—Plank Elevator.

Gerald (Napoleon, p. o.), O.—The Gerald Grain & Stock Co. recently installed the large Monarch Attrition Mill with drive and fan, furnished by the Sidney Grain Mach'y Co.

Sandusky, O.—Northern Ohio Grain Dealers and Elevator Managers held an interesting meeting Nov. 3. A six-o'clock chicken dinner was one of the pleasant social features of the session.

New Lexington, O.—Fire, believed to have been of incendiary origin, destroyed the grain elevator and detached feed warehouse and damaged the flour mill of H. A. Lowe, Nov. 3. Loss is estimated at \$15,000.

New Carlisle, O.—W. H. Scarff's Sons have made extensive improvements recently with a new elevator, electric motors with drives and miscellaneous equipment which was furnished by the Sidney Grain Mach'y Co.

Cleveland, O.—The Montana Flour Mills Co. sustained slight damage to its stock by fire, caused from choke-up in screenings' exhaust of milling separator, on Nov. 14. The fire was extinguished by one sprinkler head.

Marion, O.—Dr. G. F. Moench, of Mount Victory, has become the sole owner of the Victory Supply Co., engaged in the manufacture and distribution of stock feeds. He purchased the interests of Don E. King and Gordon Butler.

Piqua, O.—William M. Boyer, aged 83 years, passed away Nov. 2 after an illness of several weeks. He was pres. of the Piqua Milling Co., which operates four subsidiary plants in and near Piqua, including an elevator at Farrington.

Toledo, O.—William H. Annin, 57, former grain and seed broker, died after a brief illness, Nov. 12. He was formerly associated with his father, the late Frank Annin, a partner in the firm of W. H. Morehouse & Co., succeeding to the business after his father's death some years ago.

Mt. Gilead, O.—The sale of the Buckeye Milling Co., property to the Peoples Savings Bank Co. of Mt. Gilead was confirmed in the common pleas court recently and deed ordered. The purchase price was \$4,550. Ray Hildebrand, the receiver, has operated the mill as receiver for several months, since an action asking for the appointment of a receiver was filed by the Peoples Savings Bank Co. against A. W. Patzlaff, previous operator.

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New Lexington, O.—Robt. Thompson, age 35, mail carrier and an enthusiastic member of the volunteer fire department, has confessed to setting fire to the mill of H. A. Lowe which was burned Nov. 3, 1937, 12:15 a. m. He has also confessed to starting a number of other fires including two attempts to burn a structure of his own.

Weyer's Station (Sandusky, p. o.), O.—The O. & M. Seed Co., of Green Springs, has bought the elevator here and is remodeling it in preparation for regular operation. A new scale and truck lift will be installed, in addition to other grain-handling machinery. The elevator will retail seeds, feeds, fertilizer and other farm supplies, as well as buy grain.

OKLAHOMA

Haskell, Okla.—The Marston Mill & Elvtr. Co. recently purchased from R. R. Howell & Co. a large cleaner.

Beggs, Okla.—William C. McDonald, formerly a partner in the Rogers Mills Co., has put in a mill at Beggs.

Muskogee, Okla.—The Muskogee Mill & Elvtr. Co. has installed a large, new cleaner to handle fall business, purchased from R. R. Howell & Co.

Newkirk, Okla.—Dave Moxon, manager of the Blackwell Milling Co., discussed the advantages of producing pure wheat before a recent meeting of the Newkirk Business Men's Association.—E. W. F.

Boise City, Okla.—The Hart-Bartlett-Sturtevant Grain Co.'s elevator here was opened last week with Ed Davidson as manager for the company. In addition to buying grain, the company will handle the storage of grain for those desiring this service.

Oklahoma City, Okla.—Sales and administrative activities of General Mills subsidiaries at Amarillo and Wichita Falls will continue under officials at the local office, unaffected by reorganization changes made recently in the southwestern division, L. B. Colfax, division controller, has announced. Posts of general managers at Amarillo and Wichita Falls, vacated by resignations.—E. W. F.

PACIFIC NORTHWEST

North Plains, Ore.—The North Plains Feed Co. has installed a new disc separator.

Olympia, Wash.—The Martin Distributing Co. has installed a new hammer mill in its feed plant.

Wenatchee, Wash.—A new motor-driven feed grinder has been installed in the Wenatchee Milling Co. plant.

Wendell, Ida.—E. G. Commons recently completed a new feed grinding and mixing plant, which is now in operation.

Pomeroy, Wash.—The Pomeroy Milling & Warehouse Co. has sold its flour mill and other equipment to Merle Robinson.

Yakima, Wash.—The Barnes Grain & Feed Co. has installed a Howell North Star Corn Sheller, in readiness for fall business.

Washtucna, Wash.—R. P. Jones has resigned as manager of the Washtucna Grain Growers, effective Dec. 1. He has accepted a similar position with a larger grain growers organization in the heart of the Palouse country.

Spokane, Wash.—Jack Glover was elected president of the Spokane Grain Merchants' Ass'n at the annual dinner here, with Don Long as vice pres., and the following directors: John McVay, Walter Mitchell and C. F. Kyle. Richard H. Stephens is sec'y-treas.—F. K. H.

Spokane, Wash.—New members recently enrolled in Pacific Northwest Grain Dealers Ass'n are: Collins Flour Mills, Inc., Pendleton, Ore.; Ferdinand Grain Co., Ferdinand, Ida. R. W. Crommelin is manager of the former and F. M. Bieker, manager of the latter plant.—Ted Brasch, sec'y.

Portland, Ore.—The Dairy Co-op. Ass'n, made up of 2,300 farmers in Oregon and Southwestern Washington, Nov. 6 filed application for permits to erect a feed mill and warehouse to cost \$60,000 and a garage building to cost \$55,000. The company has been using for feed and grain storage the old federal prison structure. Robinson, Scott & Scott are contractors for the two buildings. Will W. Henry is manager of the company, and Louis Minoggie, pres.

St. Anthony, Ida.—Miller Bros. has completed the installation of a Howell Overhead Truck Lift, a noteworthy improvement at its plant.

Grangeville, Ida.—The Union Warehouse & Supply Co. has improved its local elevator equipment by the recent installation of a new Atlas rubber-covered belting and Minneapolis "V" elevator buckets.

Tekoa, Wash.—C. R. Frazier, manager of the Wallace Grain & Seed Co., has purchased the business and will operate it under his own management. Mr. Frazier will handle a large feed business with his own equipment for grinding and chopping, and has installed cleaning and treating equipment for seed wheat.

Davenport, Wash.—Five suits, brought by the F. M. Martin Grain & Milling Co., at Cheney, Gov. Clarence D. Martin's milling business, have been consolidated for jury trial. The insurance companies are being sued for the sum of \$30,994.90. The actions are brought for the burning of 31,294 bus. of wheat, alleged to have been stored in the Creston Co-op. Grain Co.'s elevator at Creston, which burned March 1, 1936. C. A. Connor, the manager, confessed to setting the fire, and is now in the state penitentiary. Robertson & Smith of Spokane are attorneys for the plaintiff, and Shank, Belt, Rhode & Cook of Seattle, for the insurance companies.—F. K. H.

PENNSYLVANIA

Youngsville, Pa.—C. H. Peters has installed a No. 4 Kelly Duplex Ear Corn Crusher and Feeder.

Emaus, Pa.—The grist mill of E. B. Frey, Vera Cruz road, was destroyed by fire Oct. 27. The loss was \$10,000, with partial insurance.

SOUTH DAKOTA

Sheffield, S. D.—The Atlas Elvtr. is building new coal sheds.

Aberdeen, S. D.—The Farmers Elvtr. Ass'n of South Dakota will meet here Dec. 7, 8 and 9.

Agar, S. D.—Lloyd Stoa, formerly manager of the Atlas Elevator at Vayland, has been transferred here.

Toronto, S. D.—E. A. Lovre is equipping his driveway with a set of Howell Sectional Steel Dump Grates.

Brookings, S. D.—Mr. and Mrs. George P. Sexauer celebrated their golden wedding anniversary Oct. 20. Mr. Sexauer is pres. of Sexauer & Son Co., operating 40 elevators and grain supply houses in three states.

Sioux Falls, S. D.—R. A. Jorgenson, former manager of Farm Service Store at Madison, has accepted a position with the Sharp Elvtr. Co., and has moved here.

Vayland, S. D.—Lloyd Stoa, who has been manager of the Atlas Elevator here, has been transferred to Agar, S. D. The Atlas Elevator here will be closed for the present.

Hot Springs, S. D.—The Midwest Milling Co. has started grinding of wheat, following several weeks of overhauling and modernizing the plant. It is the first time in over a year that the mill has been in operation.

Isabel, S. D.—Konrad Stummier, manager of the O'Laughlin-Burgeson elevator, sustained three broken ribs and other injuries, Nov. 4, when the light went out and his clothes became entangled in gears while adjusting machinery at the plant.

De Smet, S. D.—The Robinson Elevator, the last of the early day elevators of this city, has been taken down. The elevator was built in the late '30's for the Farmers Shipping Ass'n, but taken over a few years later by the Robinsons, and operated by them until now. George P. Sexauer & Son Co. of Brookings bought the old structure and razed it for the salvage of lumber in it. The removal leaves three elevators here, one of concrete and the other two fairly new.

Scoular-Bishop Grain Co.
GRAIN MERCHANTS
KANSAS CITY SUPERIOR OMAHA

Rapid City, S. D.—The Tri-State Milling Co. has installed Howell All Steel Sectional Dump Grates in its new plant.

Madison, S. D.—John DeVault has been promoted to manager of the local Farm Service Store. R. A. Jorgenson, former manager, has accepted a position with the Sharp Elvtr. Co. of Sioux Falls, and had moved to Sioux Falls.

SOUTHEAST

Montgomery, Ala.—M. W. Stuart & Sons will erect a feed and grist mill here, the only mill of its kind in Montgomery.

Winston-Salem, N. C.—Southside Roller Mills, Inc., obtained a charter early this month from Sec'y of State Thad Eure to manufacture flour and other articles from grain or cereals.

Amherst, Va.—Fire, reported as having originated in the engine room, probably caused by an oil engine, slightly damaged the flour mill of the W. A. Baldock Estate, on Nov. 8.

Barbourville, W. Va.—A fire, believed to have been started by pranksters or tramps destroyed the "Old Mill" Nov. 1, a community landmark since 1895. The old grain mill had been idle for many years. Laurel F. May, son of the owner, estimated the loss at between \$5,000 and \$7,000.

Elberton, Ga.—The Elberton Milling Co. was recently reorganized by Harold Black, pres., and Robert Nickerson, sec'y, and remodeled into a feed mill. New grinding and mixing equipment, which includes an oat huller, corn cracker, grader, mixer, grinder, etc., has been installed.

Albemarle, N. C.—A hammer mill has been installed recently at the Stanly Flour Mills. Power in the mill is being replaced with a new Diesel engine, and other new equipment will be added in the near future, according to Cecil Lowder, manager. The Stanly Flour Mills is located just outside the city limits on the Norwood road.

TEXAS

Crowell, Tex.—The Self Grain Co. is installing a new Howell Duplex Safety Man Lift.

WISCONSIN

Navarino, Wis.—The H. J. Meyer Feed Mill was destroyed by fire.

Manawa, Wis.—O. Esche has installed new feed equipment in his mill.

LaCrosse, Wis.—G. W. Rice is proprietor of the LaCrosse Feed Store, recently opened for business.

Baraboo, Wis.—Arthur H. Brown has just recently installed a new No. 2 Kelly Duplex Vertical Feed Mixer.

Oconomowoc, Wis.—T. A. Torgerson, R. R. No. 1, has a new No. 2 one-ton Kelly Duplex Feed Mixer with motor drive.

Eau Galle, Wis.—Vincent Wallerich is equipping his feed plant with a new Howell Cyclone Batch Feed Mixer with electric motor drive.

Milwaukee, Wis.—Philip Orth, Sr., aged 92 years, one of the oldest members of the Milwaukee Grain & Stock Exchange, died Nov. 15.

Mauston, Wis.—Curran Bros. have improved their local plant with the installation of a new Atlas Rubber Covered Elevator Belt and Salem Cups.

Milwaukee, Wis.—Reconstruction of the C. A. Krause Milling Co. plant will cost more than \$200,000. Klug & Smith are the engineers and the Federal Engineering Co. the builders.

Waupaca, Wis.—On Nov. 1 lightning struck the lightning rod system on the plant of Fisher & Fallgatter and damaged the small electric motor on the motor-generator set in connection with the electro magnetic separator.

Superior, Wis.—The Wisconsin Grain and Warehouse Commission, with Senator Philip E. Nelson as a new member, held its organization meeting recently. Charles W. Peacock was elected chairman, Senator Nelson, vice chairman, and L. R. Dauplaise, sec'y.

Wilson, Wis.—The local elevator and warehouse has been bought by Warren Karnes, of Hatchville, who is chairman of the town of Cady, and Herman Lewandoske, of Pierce county. They took possession Nov. 1. Mr. Lewandoske will be in charge of the business.

Milwaukee, Wis.—A permit has been issued to Premier-Pabst Corp. for construction of an \$85,000 grain elevator at 1620 North Commerce st. The permit provides for 8 circular bins of concrete and steel.

Watertown, Wis.—The grain elevator, a frame structure operated by the Globe Milling Co., was gutted by fire Nov. 8, and large quantities of grain and flour were ruined. Explosion is believed to have caused the blaze. Loss is estimated at \$25,000, with partial insurance. The elevator was taken over by the Globe company 2 years ago, as an experimental station, and used for storing grain.

Supply Trade

New York, N. Y.—The National Ass'n of Manufacturers and the National Industrial Council will hold their annual conventions concurrently at the Waldorf-Astoria hotel here Dec. 5-9, inclusive, the first two days being devoted to the Council, the last three to the Congress of American Industry sponsored by the Manufacturer. The last day of the Congress has been designated as "Labor Day," when Gen. Hugh S. Johnson will be among the speakers on "Wages and Hours."

Kansas City, Mo.—Elwood N. Jones, vice-pres. Jones-Hettelsater Const. Co., died Nov. 16 after an illness of only two weeks. Mr. Jones was born in 1892, and after finishing school was employed as a carpenter on grain elevator work. He became construction superintendent and later general superintendent. On Jan. 1, 1920, together with A. R. Hettelsater, formed the Jones-Hettelsater Const. Co., and served as vice-pres. until his death. He was in charge of construction work for the company, being active in the design and construction of the many elevators, feed and flour mills, cement storage and miscellaneous work which the company has handled. Mr. Jones had a host of friends in the trade who will greatly mourn his loss.

Los Angeles, Cal.—Under an order entered by the Federal Trade Commission, Nelson E. Woolman and Lyle G. Jackson, trading as Power Seal Co., are directed to cease and desist from making certain false and misleading misrepresentations concerning the merits of Power Seal, a preparation sold in pellet form for use in internal combustion engines. The order prohibits the respondents from representing in advertising matter, radio broadcasts, or otherwise, that the use of their product in internal combustion engines will restore compression, completely rejuvenate tired and sluggish motors, seal leaky and pitted valves and reseal them, restore efficiency

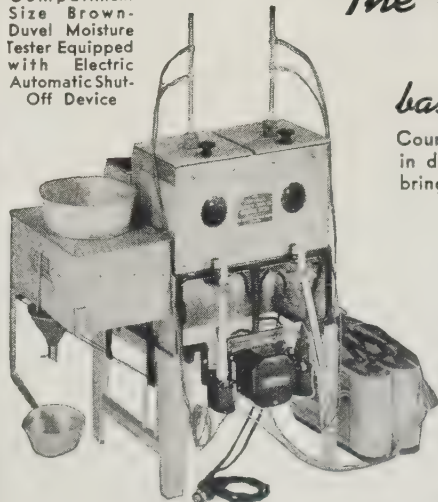
to ill-conditioned engines, effect savings in oil and gas consumption, or increase the power, speed or mileage of engines.

Chicago, Ill.—Percy C. Brooks, former executive vice-pres. Fairbanks, Morse & Co., died recently. Mr. Brooks started his business career with the Atlanta Machine Works following his graduation from college. In 1898 he began nearly 40 years' association with Fairbanks, Morse & Co., as assistant to the general manager at Beloit, Wis. He became manager of the Beloit plant, and when Canadian Fairbanks-Morse was organized he was appointed general manager. Four years later he was made vice-president of the Canadian enterprise. At the outbreak of war in 1914, Mr. Brooks converted his factory into a munition works for the British Government. Using a system of continuous operation on six-hour shifts, employing over 6,000 men and women, he built up an organization so skilled and thoro and a plan of operation so intensive that his plant produced over five million shells (3.3 and 8 in. diameter)—many more than any other factory in the United States or Canada. His efforts were rewarded by a visit and compliments from British Royalty. After the war Mr. Brooks was transferred to St. Johnsbury, Vt., as vice-president and general manager of E. & T. Fairbanks Co. Later he was made president of this company, a position he held for about ten years. He was president also of E. & T. Fairbanks & Co., Ltd., Canada, and had supervision of the company's plant at East Moline, Ill. His was the task of supervising the acquiring of E. & T. Fairbanks Co. assets by Fairbanks, Morse & Co. In 1930 Mr. Brooks was transferred to Chicago as executive vice-president, a position he relinquished a few months before his death.

Wage rates for farm labor are likely to rise during the next few years, and desirable farm labor will probably be especially scarce. Many farmers will have to employ less desirable labor, because of necessity, and pay high wage rates for it, according to Dr. F. A. Harper of the department of agricultural economics at Cornell University.

Under the commodity exchange act 901 futures commission merchants and 665 floor brokers have been registered. During the fiscal year ended June 30 trading in all grain futures amounted to 16,577,003,000 bus., compared with 11,006,911,000 bus. during 1936. Trading in wheat futures amounted to 70 per cent of all trading in grain futures, while corn transactions amounted to 18 per cent of the total. Eighty-eight per cent of the total volume of trading in all grain and flaxseed futures, 14,631,387,000 bus., was transacted on the Chicago Board of Trade.

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CHICAGO, ILL.

Field Seeds

Indianapolis, Ind.—Thos. C. Fagan, 86, of Fagan's Seed Store, passed away Nov. 10.

Jackson, Minn.—Seger Seed Co. is installing a new and larger Fairbanks-Morse diesel engine.

Chicago, Ill.—The International Crop Improvement Ass'n will meet at the Stevens Hotel, Nov. 30.

Burlington, Ia.—The seed store of the Dehner Seed & Supply Co. has been remodeled, redecorated, and fitted with new fixtures.

Billings, Mont.—The state corn and seed show will be held here during three days in the middle of December in the Commercial Club building.

Coffeyville, Kan.—A new brick and concrete warehouse has been built by Frazier's Seed Store, and is being fitted with new seed cleaning machinery.

Heemstede, Holland.—Delivery of mail to Frank Van Borssele has been forbidden by judicial sentence. Van Borssele had advertised to send 365 bulbs on receipt of \$1.

Portland, Ore.—Some 500 exhibitors have reserved space in Oregon's first state-wide corn show at the Public Market Nov. 29th-Dec. 4th. The show is limited to yellow corn.—F.K.H.

Boone, Ia.—Storage capacity for processed corn at the Boone plant of the former Sioux City Seed Co., now Michael-Leonard Seed Co., has been increased to 100,000 bus. by leasing an additional building.

Maquoketa, Ia.—A branch store has been opened here by McNeilly Hybrid Seed Corn Co., with Maurice McNeilly and Cecil Maiolfi in charge. A drying plant has been installed at Hurstville, two miles north of here.

Columbus, Mo.—The Missouri Corn Growers Ass'n's annual seed show, with exhibits of corn, oats, wheat, rye, soybeans, sorghums and other field seeds, will be held Dec. 8, at the Missouri College of Agriculture.

Ames, Ia.—More than 600 varieties of corn on a 40 acre field at the Iowa research grounds were exhibited by Dr. Stuart Smith, research director and a leading corn breeder, Nov. 3. Nearly 125 retailers of Iowa hybrid seed corn were in attendance, and observed that while open-pollinated varieties yielded from 50 to 78 bushels per acre, hybrids yielded from 78 to 121 bushels.

Washington, D. C.—Early senate action is expected on the Senator Gerald P. Nye (North Dakota) resolution introduced last Aug. 4. The resolution reads in part: "Whereas, the price of flaxseed at Minneapolis was 26c below parity . . . in January, 1936, and has been consistently lower since that time . . . the sec'y of agriculture is . . . directed to make a thoro investigation of the influences and factors keeping the price of flaxseed under parity."

Muncie, Ind.—The Indiana Pop Corn Co. has finished construction of a new conditioning plant and warehouse for pop corn, fitted with cleaning machinery, and heat control elements for conditioning the grain for sale.

Rockford, Ill.—Condon Bros. have bought the H. W. Buckbee seed business, billing in the property from Receiver Thomas E. Courtney for \$42,000. The Condon bid was approximately \$22,000 for the seed business and good will, and \$20,000 for the building in which the business was housed.

Mason City, Ill.—Two large seed handling and storage houses of G. D. Sutton Co. and W. T. Ainsworth & Sons have been leased to Funk Bros. Seed Co. of Bloomington, for curing, sorting, shelling, and grading that company's celebrated lines of hybrid and open pollinated seed corn. The local Funk office, in charge of Charles E. Flinspack, is in one end of the newest of the Sutton structures.

Chicago, Ill.—Use of chemically treated seed makes fertilizer unnecessary, announces Howard D. Salins, inventor of a chemical seed treating process. This year's tests with corn in Wisconsin and Illinois, he said, showed a 25 per cent increase in yield over adjacent fields planted with untreated seed corn. The chemical, he said, promotes bacterial growth that replenishes soil food elements.

Knoxville, Tenn.—Unsatisfied with the results from testing 13 Illinois and Iowa commercial hybrids in competition with local varieties of corn, the Tennessee Experiment Station has refused to recommend out-of-state hybrids. An attempt to produce a hybrid yellow Paymaster corn, begun in 1935, is being continued by the station, which is now seeking to concentrate its color, before testing yields.

Yarmouth, Ia.—Ray Redfern, 56, best known of Iowa's corn growers, died Nov. 12, following a long illness. A past pres. of the Iowa State Corn & Grain Growers Ass'n, Mr. Redfern had specialized in developing Reed's yellow dent corn, winning many prizes. He was named Master Farmer of Iowa in 1927, and served as corn judge at both the Iowa State Fair and the International Grain & Hay Show at Chicago.

Ottawa, Ont.—Heavy importations of red clover seed are anticipated as a result of an investigation by the Canadian Department of Agriculture which revealed a serious shortage in Canadian clover and grass seeds, due to winter killing. Preliminary estimates place available red clover seed at 2,500,000 pounds under estimated seed requirements, while the supply of alsike, timothy, and sweet clover is expected just to meet demands. Some importations from the United States are already reported.

Jasper, Ind.—An experiment in planting of hybrid seed corn has just been completed by forty 4-H Corn Club boys of Dubois County. Austin Randolph, hybrid corn producer, gave each of the boys seven pounds of hybrid seed corn last spring for the demonstration. Regular corn was planted alongside the hybrid corn. The hybrid corn produced 22.6 per cent more corn than the regular seed. The high yield of the hybrid corn was 139.97 bushels to the acre, compared with 120.22 of regular seed. The entire forty projects gave an average yield of 76.2 an acre of hybrid corn and 62.2 bushels of regular corn.—W.B.C.

Davenport, Ia.—The Scott County Seed Improvement Ass'n has been incorporated with \$10,000 capital stock, divided into 2,000 shares of common with 50c par, to be held only by members of the Scott County Farm Bureau, and 900 shares of preferred with a \$10 par value. Officers are Detlef Ihms, Eldridge, pres.; James Holst, Davenport, vice-pres.; Herbert Schneckloth, Davenport, treas. Directors are the above officers and Julius Paustian, Walcott.

Portland, Ore.—Hybrid corn, like the mule, may be without pride of ancestry or hope of posterity, says J. J. Inskeep, county agent of Clackamas County, but also like the mule, which is the best-known of the animal hybrids, these hybrid corn crosses are tops for performance. Naturally results vary with the parentage of the seed and although the first generation from such crosses are desirable, seed saved for the second generation cannot be expected to give uniform results. This means that new seed has to be purchased each season and hybrid seed is expensive.—F.K.H.

Washington, D. C.—Four producers of nitrogen-fixing bacteria, commonly known as commercial inoculants for promoting growth of leguminous plants, are named in complaints issued by the Federal Trade Commission under the Robinson-Patman Act. Agricultural Laboratories, Inc., Columbus, O.; Hansen Inoculator Co., Inc., Urbana, Ill.; Albert L. and Lucille D. Whiting, trading as The Urbana Laboratories, Urbana, Ill., and The Nitragin Co., Inc., Milwaukee, are given less than a month to file answers to charges that they are discriminating in price unlawfully by selling bacteria to some purchasers at prices lower than those charged others for bacteria of like grade and quality.

Camargo, Ill.—H. L. Gates Seed Co. has purchased the old 2-story brick mercantile and bank building and is re-modeling into a seed-corn processing plant. To the main building, which is 45x79x24 ft., and the addition north, which is 45x28x16 ft., has been added a one story boiler house, 45x24x12 ft. The plant is being equipped with modern shelling and grading machinery, individually operated by electric motors. The fan for controlling the air-flow from the furnace to the drying racks, is to be operated by a diesel engine. A new Fairbanks 24½-ton beam-platform scale has been installed, as has a 40-ft. hiker leg, with 16x8 inch cups. The capacity of this plant is 25,000 bus. storage and 3000 bus. drying. The company is incorporated for \$50,000.—G.H.R.

Minneapolis, Minn.—Dr. H. L. Walster presided at the annual meeting of the U. S. Flax Institute, in the Nicollet hotel, Nov. 19. In attendance were crushers, consumers, producers, representatives of government bodies and various ass'ns.

Norfolk, Neb.—Rep. Karl Stefan stated Nov. 16 F. C. A. officials advised him an agent would be sent to the Omaha office to investigate Stefan's complaints on collections of feed and seed loans. Collectors have been going into the drought district and insisting on the farmers paying their feed and seed loans where they have raised nothing with which to pay, he complained.

Cincinnati, O.—The National Paint, Varnish & Lacquer Ass'n, meeting here Oct. 29, adopted a resolution that pointed out the deficiency of drying oils in the United States and resolved that "appropriate action should immediately be taken by the Government vigorously to assist in all ways, including financial aid, the development of an adequate production of drying oils by encouraging (a) the planting of a greater acreage of flax in states in which it is now grown and on suitable land in states where it is not now grown and of varieties that will produce linseed oil of suitable quality."

Directory

Grass & Feed Seed Dealers

CRAWFORDSVILLE, IND.
Crabbs, Reynolds, Taylor Co., clover, timothy.

GREEN SPRINGS, OHIO
The O & M Seed Co., seed merchants.

PAULDING, O.
Stoller's Seed House, wholesale field seeds.

ST. LOUIS, MO.
Mangelsdorf & Bro., Ed. F., wholesale field seeds.
Scott, T. Maurice, field seeds, carlot originator

Big Hybrid Seed Corn Demand Promised

Yields made by hybrid corn thru the Corn Belt run from 40 to 100 per cent above ordinary open pollinated corn this year. Under equal conditions the hybrids have been consistently outstripping ordinary corn, but under favorable conditions the hybrids have raced so far ahead as to eliminate competition.

An 11-section farm, in northwestern Iowa, where soil fertility has been maintained with red clover, annually grows 3,500 acres of yellow dent corn. The average corn yield in a normal season is 50 bus. per acre. This year the ordinary varieties produced 51½ bus.; but the hybrid corn produced 102½ bus. per acre.

Similar stories are almost endless. It appears that grain dealers may safely expect the demand for hybrid seed corn to greatly outdistance the supply again in 1938.

Do Not Miss the Grain and Hay Show

Farmers from 35 states, six provinces of Canada, and Australia will exhibit the finest samples of the past season's harvest in the 19th International Grain and Hay Show, to be held Nov. 27 to Dec. 4 at the International Amphitheatre at the Chicago Stock Yards.

The crops show is a department of the International Live Stock Exposition, which will be held this year in its 38th annual renewal. Approximately 14,000 animals, representing 30 different breeds, will be exhibited this year in the live stock show.

Competitive contests will be offered for nearly all farm crops, from corn and small grains to seeds and hay. There will be 99 different classes and 1020 cash premiums, each accompanied by a ribbon. High light awards are the corn and wheat championships. The winners are crowned "Corn King" and "Wheat King" of the year.

One of the new educational features of the International Grain and Hay Show this year will be an exhibit of foreign types of corn.

A collection of ears will be shown which were grown in Mexico, Guatemala, Santa Domingo, Bolivia, Peru, Spain, Italy, Czechoslovakia, Russia, and China; and other corn samples are being sent to the show by the American consuls in the Argentine and the Union of South Africa. The management reports that nearly every foreign corn growing section of the globe will be represented.

The foreign samples will include flour corn from the Andes as well as specimens of the crop that were grown at an elevation of 14,000 feet.

The complete American corn picture will be shown at the exposition this year by means of an outline map of the continent, 14 feet high and 25 feet wide. Ears from each state and province in North America will be wired to their proper location on the map, and under each ear, brief statements will be listed giving the importance and adaptation of each type. Thus visitors will be able to see at a glance the entire corn picture of the continent, ranging from the large dent ears of California to the slim flint ears of Saskatchewan. Such a collection has never been shown at any previous crops exhibition.

Seed Council to Chicago

The Seed Council of North America will hold an evening meeting in Chicago Dec. 1, announces A. L. Stone, Madison, Wis., sec'y. Talks and discussions will follow dinner.

Primary subjects will be "Federal Seed Legislation," by W. A. Davidson, of the Division of Seed Investigations, and "Weed Control as It Affects the Seed Business," by O. S. Fisher, Extension Division of the Bureau of Plant Industry.

Soybean Breeding Governed by Purpose

Altogether, the Department of Agriculture and state stations have brought into this country some 10,000 selections of soybeans for testing and experiment, states the 1937 yearbook of the federal Department of Agriculture. Thirty-two stations and the Department are engaged in breeding work. About 100 varieties have been introduced for commercial growing since 1894. Yet the breeding work is only at its beginning.

"The soybean is very particular in its local requirements," explains the report. "This means that special varieties for each kind of use have to be developed for each separate region or locality. The uses themselves demand quite distinct characteristics. Thus beans grown for oil should have a high oil content and a high iodine number, which is associated with good drying quality. The lecithin content of the oil is also important for some industrial uses. Beans for certain industrial uses should have a high protein content. Beans grown for food protein should be high in the three amino acids, cystine, tryptophane, and tyrosine.

"Progress has been made in developing varieties for local use that meet these needs. But there is much still to be done. The breeder, however, has a wealth of material, and the measurements and tests already made indicate the range of some of the characteristics among different varieties. Oil content, for example, ranges from 12 to 26 per cent, iodine number from 118 to 141, protein content from 28 to 56, lecithin content of the oil from 1½ to 3 per cent; the percentage of the amino acids mentioned varies over a wide range. The breeder can choose and combine, build up this, reduce that.

"Diseases are not yet a serious factor with soybeans in this country, but it is known that resistance to several diseases varies also, and when that complication enters the breeder has some information on which to proceed.

"The soybean is a self-fertilized plant, and artificial crossing is difficult and tedious. Hybridization, however, offers the best means of combining desirable characteristics and getting a wide variety of segregates from which to make selections. The inheritance of a good many characteristics of the flower, stem, leaf, and seed has been worked out, and a beginning at least has been made in mapping the location of a few genes on the chromosomes."

At the 2-day meeting held in Dodge City, Kan., by the Senate sub-committee on agriculture on farm aid, opposition was expressed to compulsion on farmers, and objection was made to processing taxes.

The Abnormal Granary

By CHARLES A. HEATH, Chicago

In a recent address in a Corn Belt State, Sec'y Wallace is quoted as having said: "Big crop years don't come together."

As a matter of fact, that is the way they do come, and follow very closely a 7-year cycle. In 1870, 1871, 1872, the average yields per acre were: 1870, 29.3 bu.; 1871, 27.2 bu.; 1872, 29.4 bu.

Seven years later the average yield for 1879 was 28.2 bu.; 1880, 27.3 bu.

Then as follows: 1884, 28.3 bu.; 1885, 28.6 bu.; 1888, 29.1 bu.; 1889, 29.5 bu.; 1895, 28.0 bu.; 1896, 30.0 bu.; 1904, 28.2 bu.; 1905, 30.9 bu.; 1906, 31.7 bu.

How closely these yields follow a 7-year cycle. The same is true down to date.

To refer again to the Secretary's speech, he said:

"The question may be asked, 'What if there are 3 or 4 years of good corn crops in a row? How could the plan be kept operating under such conditions?' In answer to such a question, I would call attention first to the fact that since the war we have had as many as three big corn crops in a row only once. That was in the years 1921, 1922 and 1923."

The Secretary, in this statement, overlooked the crop of 2700 millions in 1919, and 3000 million in 1920, making five big crops in succession. Then again, the years 1925, 1926, 1927, 1928, four years in succession, had large crops, with an average of 2,704,950,000 bus per year; almost as large as the three years to which he refers, 1921, 1922 and 1923.

This country never raised a 2500 million bu. corn crop until 1895. Then in 1896, 2600 million; 1899 ditto; 1900 ditto. Then followed eleven crops in succession of 2500 million or over. 1902, 2800; 1903, 2500; 1904, 2700; 1905, 2954, the largest of record. Followed by 3032 million in 1906. But 1907 had 2600; 1908, 2566; 1909, 2600; 1910, 2852; 1911, 2474; 1912, 2947; making a series of 14 large crops in succession; the 1911 crop falling only 25 million short of 2500 million. The Secretary has overlooked in his remarks that the 1919 crop was practically 2700 million bu.; and the 1923 crop 2875 million bu., both larger than 1922.

Going back a period of 70 years, as covered by the U.S.D.A. Corn crop figures, we do not discover any falling off in yields, or any occasion for alarm that soil fertility is being depleted. Let us divide this 70 years into approximately three periods. From 1873 to 1894 inclusive, we had an average yield per acre of 25.1 bu., and the lowest yield in any year in that period was 19.8 bu.

Now we might expect lower production in the next 22 years. From 1895 to 1916 inclusive, the yield was 27 bu. per acre, according to U.S.D.A. reports. And during this period of over 20 years there was not one single crop failure; the lowest yield being 18.2 bu. Then from 1917 to 1934 inclusive, we have an average yield of 25.8 bu., with only one low yield, and that was in 1934, the year of the great drouth, when we had 15.8 bu. of Corn per acre.

Not only has there been no decline, but,

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MICHAEL-LEONARD SEED CO.
formerly Sioux City Seed Co.

on the other hand, an increase in Corn production. There has been no year in 70 years when we have been without a crop or a carry-over. There has not been any occasion for alarm, and further than that, the crops are surprisingly uniform one year with another. The 1936 crop was the lowest average yield of record in 72 years, 16.45 bu. But even this does not seem to warrant or justify the great extensive, exclusive, expensive, extravagant program of the Government to pay farmers a cash bonus for restoring and conserving the fertility of the soil lest they come to ruin.

The United States today is growing the same size Corn crop that it raised 37 years ago. This, too, notwithstanding improvements in machinery for producing and harvesting the crop.

In 1900 the foreign production of Corn in selected countries was 325 million bu. Today it is 1250 million bu. Of this amount, Argentina produces 452 million bu., Roumania 212 million, Jugo Slavia 120 million, Italy 100 million, Brazil 200 million, and Russia 190 million bu.

Since 1900 there has been an increase in foreign countries of the use of machinery for the production of the crop. This Corn in foreign countries is produced by labor from one-third to one-half the cost paid in the United States. It is a natural and logical result, by the shifting of agricultural production, that we have lost and are set to lose more of our foreign trade exports in this cereal.

And so we wonder what is back of the whole scheme anyway.

Perry Group Meeting Attracts Crowd

Nearly 100 grain and feed dealers from west central Iowa gathered at the Pattee hotel, Perry, Ia., Nov. 17 for a turkey dinner and evening meeting under the sponsorship of the Western Grain & Feed Dealers Ass'n. The meeting, arranged by Bill Tack and Bob Connors, local lights in the grain business, was in charge of Vice-Pres. W. C. Walker, Ogden, and Sec'y Ron Kennedy, Des Moines, of the ass'n.

Discussions covered the moisture content of new corn, the government's corn sealing program and rules for loans, prospective crop control legislation, and possibilities for passage of a state law to control itinerant truckers.

GRAIN DEALERS from Yale, Panora, and Boxholm reported new corn to be testing from 14 to 16% moisture, and making good yields. Heavy moisture at Burt was reported to be keeping corn from that territory in the No. 5 class.

Dealers from Dallas Center, Scranton, Boyton, Jamaica, and Casey, indicated good yields and quality, new corn grading from No. 2 down to No. 4, the late picked corn showing the best quality.

Chet Gifford of Nevada, said field corn is testing 14.5 to 17.5% moisture, while that in the crib is testing 17.5 to 19.5%.

Omaha's Chief Inspector, Harry Clark, said the average moisture of new receipts for the last several days has been 16.3%, most of it running from 14.5 to 17%, damage 1 to 1½%.

MR. CLARK described the Omaha Grain Exchange laboratory tests for acidity, which gives an indication of how long high moisture corn may be safely held before it starts to go out of condition.

ELMER MILLIGAN, Jefferson, expected government corn loans to curtail the movement of new corn. "Farmers remember," he said, "that when the government last gave them loans on sealed cribs, the market advanced. They will feel now that they can lose nothing by accepting a government loan."

A highlight of the meeting was the auction of a car of corn on track at Alleman, Ia. The car was finally knocked down to Jim Young of Kansas City.

Patents Granted

2,087,492. Grinding and Mixing Hammer Mill. Wm. E. Williams, Harrisonville, assignor of one-half to Delbert T. Hulse, Kansas City, Mo. The mill comprises a closed casing, a rotor mounted for rapid rotation, grinding hammers, a fan housing, a fan shaft extending thru fan housing, and means for feeding material to be ground into casing in the path of hammers, in combination with means for introducing molasses into casing.

2,089,138. Spout Type Magnetic Separator. Roswell H. Stearns and Elmer C. Kiekhaefer, Milwaukee, assignors to Stearns Magnetic Mfg. Co., Milwaukee, Wis. The combination with a spout having a trap door, of a magnetic separator having a movable core element and a connection between core element and trap door for the actuation of door in accordance with the energization and de-energization of the separator, said core element being located in the magnetic field of the separator and adapted for movement in a direction to close the trap door when the separator is energized.

2,088,846. Grain Cleaner. Emory William Douglass, Douglas, Minn. The cleaner comprises a frame, a sieve-casing, resilient members attached to the casing and the frame to support the casing for reciprocatory motion, at least one actuating arm attached at one end to one of the resilient members, a spring and means by which the spring is mounted on the frame, a motor housing supported on spring and having a projecting portion resting on the other end of the actuating arm, and a motor mounted in casing, said motor having a shaft with means to unbalance it upon rotation thereby to gyrate the motor.

2,087,464. Grain Separator. Ray C. Ayers, Slaton, assignor to Air Way Elevator Co., Slaton, Tex. The separator includes a shell having an air suction conduit communicating with its upper end and with a suction fan spaced apart from shell, an air and material inlet, a cylindrical baffle within and in concentric relationship with shell, a V-shape deflector plate removably secured to baffle and confronting inlet whereby to divide the material influx into two streams, meeting at a point diametrically

opposed to inlet and means below shell for receiving and conveying precipitated material out of the influence of the air in shell.

2,090,685. Feed Mixing Mill. Alvin C. Krause and Frank C. Krause, Beloit, Wis. In combination are a dry feed mixer having a gravity fed inlet hopper, an opening in one side of inlet hopper, a semi-solid liquid mixer comprising a hopper positioned adjacent inlet hopper the bottom being formed into a circular-in-cross-section trough having an open end which registers with the opening in the side of inlet hopper, a mixing and propelling rotor in trough one end protruding thru the opening in the side of inlet hopper, a stator detachably secured to trough and being adapted to inclose and rotatably support the protruding end of rotor, a relatively small outlet in the free end of stator, whereby the liquid ejected therefrom will contact and join the mass of dry feed as it passes thru inlet hopper.

2,092,025. Magnetic Chain Feed Separator. Webster I. Sallee, Cleveland, O. A magnetic chain feed separator comprising a runway, sets of prongs extending transversely of the runway, the prongs of one of said sets alternating longitudinally of the runway with prongs of the other set, adjacent prongs being spaced from each other and forming passages for discharging non-magnetic material therethru as the prongs move along a predetermined portion of the runway, means for moving prongs longitudinally of the runway, means mounting prongs to render one of said sets responsive to a pole of said magnetic means of one polarity and the other set to a pole of said magnetic means of another polarity, concurrently and continuously, along the portion of their path of movement, the prongs passing progressively from the influence of the magnetic means along another portion of their path of movement.

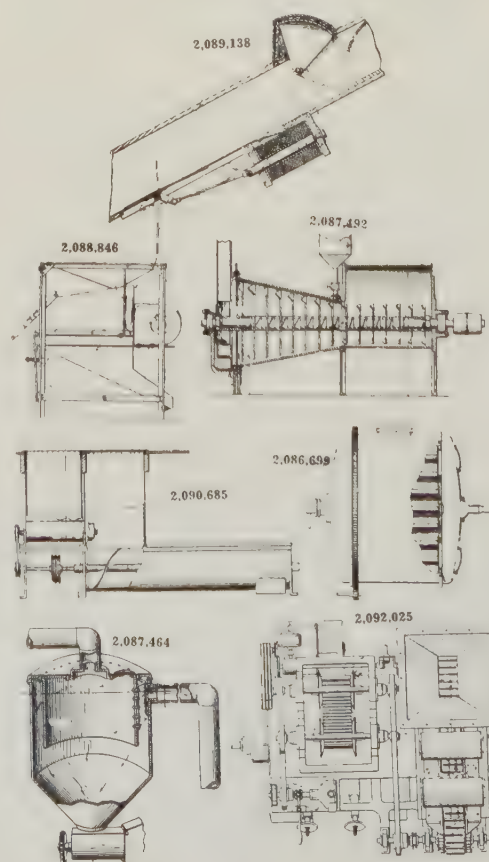
2,086,699. Screen for Driers. David Dalin, Milwaukee, Wis. In a grain drier of the vacuum type, a movably mounted container having a compartment to receive material to be dried, means thru which air may be exhausted from the container to establish a vacuum therein, means for moving said container to cause material contained therein to move across one wall of the material receiving compartment, said wall having an opening thru which vapors may be drawn from the material being dried, and a screen plate covering said opening to prevent the passage of the material being dried thru the opening, said screen plate comprising a thin perforated plate whose perforations are of a size to prevent the passage therethru of individual pieces of the material being dried, and whose thickness is such that individual pieces lodged in the perforations project beyond the outer face of the plate so as to dislodge possible accumulations of mealy matter in the perforations, and said plate being mounted so that the material moving within the container is free to sweep unrestrictedly across the inner surface of the plate so as to dislodge individual pieces of the material from the perforations.

Exchanges Register Prices Says Taylor

A mistaken idea is that the world price for wheat is set at Liverpool, declared Dr. Alonzo Taylor, director emeritus of the Food Research Institute at California's Leland Stanford University, before the Royal Grain Commission at Ottawa, Can., Nov. 15.

"The world wheat price," he said, "is a composite of a wide variety of influences arising in all exporting and importing countries, which find expression in the prices registered on three important exchanges, Liverpool, Chicago, and Winnipeg. Since these markets interact upon one another withdrawal of any one of them would introduce more uncertainty in the world wheat price structure."

"The country without a grain exchange is placed at a disadvantage for quick action in disposal of wheat on favorable terms for lack of a registry of price and volume of trade," believed Dr. Taylor. "Establishment of a wheat board in Canada in place of the present trading system might bring a higher price for Canadian premium wheats, but would probably lower the average price for the total crop, because foreign buyers would not be familiar with the advantages of high grade Canadian wheat."



Grain Carriers

The Central Western Shippers Advisory Board will meet Dec. 8 at Cheyenne, Wyo., and the Ohio Valley Board Dec. 14 at Cincinnati, O.

The largest cargo of wheat ever discharged at Cork, Ireland, arrived recently in the steamer Pilar de Larrinaga from Australia with 9,501 tons.

High ocean freight rates are stimulating shipbuilding. In Sweden 29 ships are under construction and 74 on order, a greater number than ever before.

Washington, D. C.—Officials of the Interstate Commerce Commission have indicated that the trucking industry contemplates a 15% increase in motor carrier rates.

Cars loaded with grain and grain products during the week ended Nov. 6 totaled 43,873, against 29,330 during the like week of 1936, as reported by the Ass'n of American Railroads.

C. & I. M. supplement No. 3 to tariff No. 31-A, supplement No. 4 to Ill. C.C. No. B-191, effective Nov. 24, changes transit privileges on soybeans, milled, ground or crushed, at Springfield, Ill.

C.C.C. & St. L. supplement No. 60 to tariff No. 1369-C, supplement No. 62 to Ill. C.C. No. 922, effective Nov. 29, restricts routing in connection with grain rates from various Illinois points to Champaign, Ill.

Chicago, Ill.—The Illinois Commerce Commission at its Chicago office Dec. 14 will hear any requests for suspension of the intrastate freight rate increases to correspond with those authorized by the Interstate Commerce Commission.

Chicago, Ill.—The Western Trunk Lines Com'te has refused to accept a proposed increase in the minimum for a car of grain to 80,000 lbs. Due to the earnest work of grain dealers ass'ns, and grain dealers no change will be made in the minimum capacity for carloads of grain.

Statistics refute the argument that the split train bill cars would reduce accidents. In the period 1923 to 1935 freight train lengths were increased 16%, while accidents to trainmen decreased 61%. It should be obvious that doubling the number of trains would increase the number of accidents.

Superior, Wis.—The traffic com'te of the Association of Commerce is protesting the difference in freight rates between Duluth and Superior to Minnesota points and has appealed to the Wisconsin public service commission for an equalization in rates, pointing out that the present rates as ruled by the Interstate Commerce Commission are discriminatory and favor Duluth shippers. Coal men there say that 50 per cent of Superior's trade is in Minnesota and a difference in the rate alone from Superior and Duluth to Minneapolis is 10c per ton on coal, with about 1 per cent per hundredweight on other commodities.—F.G.C.

A C. O. D. service on L. C. L. shipments has been inaugurated by the railroad companies under a new rule published by the Consolidated Classification committee in Supplement No. 13 of Consolidated Freight Classification No. 11. When this service is desired the shipments must be tendered on a uniform straight B/L and the amount of the C. O. D. must be specifically stated on such B/L. Each package must also be plainly marked, labeled or tagged by the consignor showing the letters C. O. D. and the name and address of the consignor and consignee. If consignor desires to forward invoice or collection papers they must be securely attached to the shipping order.

A constant increase in the speed of freight trains has been made in the past fifteen years, with the result that in the first six months of 1937 the average number of miles per train each day was 386.4 miles, or nearly 50 per cent greater than in 1923.

St. Louis, Mo.—The St. Louis Merchants Exchange has petitioned the Interstate Commerce Commission for relief on grain rates from St. Louis to points in Arkansas and Louisiana, and to cities on the east bank of the Mississippi river in Mississippi and Tennessee. Oklahoma, it is alleged by the petition, enjoys much lower rates to the same points.

Dallas, Tex.—Possible revision of grain rates from western points to southeastern and Mississippi river crossing destinations is the subject of an Interstate Commerce Commission hearing that opened here Nov. 8. Cases involved are: Western points into the Southeast and within the Southeast; rates to Mississippi crossings and to points in Arkansas and Louisiana, and, in Texas, intrastate and interstate. Nearly 100 grain dealers in attendance expect the hearing to last nearly a month. Boosting the rate on coarse grains from 24½c to 27c per cwt. from Lubbock to Fort Worth, and from 29½c to 30c between Lubbock and Houston is expected to be opposed. The federal barge lines are seeking lower coarse grain rates so as to compete with the railroads.

Flaxseed Claims Now Under Shrinkage Rule

B. T. Jones, Agent's Supplement No. 17 to tariff No. 515-B, Ill. C.C. No. 377, effective Nov. 15, 1937, adds flaxseed to the rule governing shrink on carloads of grain, making "(b)" under Rules to Govern Settlement of Claims For Loss of Grain read: "When liability is established, there shall be deducted from the loss in weight on all grain and flaxseed one-eighth of one per cent of total weight of contents of the car." This addition of flaxseed to the rule is applicable in Central Freight Ass'n, Canadian, and Trunk Line territories. This change is in line with a change made in the rules of Western railroads several weeks ago.

Grain Rates Equalized

Equalization of rail rates on grain from Minneapolis and Duluth and from Kansas City and Missouri River points to Central Freight territory has been ordered by the Interstate Commerce Commission. The new rates become effective Jan. 15, and will apply to grain, grain products and grain by-products.

With the railroads is left the privilege of effecting the new balance with thru rates, or by combinations of rates thru Chicago, East St. Louis and other gateways to Central territory. The decision provides simply that grain from Kansas City and from Minneapolis-

Duluth terminals to the same points in Central Freight territory shall take the same rate, thus wiping out an alleged 3c differential in favor of northwest grain.

Left undisturbed are rates to two areas. Minneapolis-Duluth shipments will have a 3c advantage to Mackinaw City, Provemont, Traverse City, Frankfort, Ludington, Reed City, Grand Rapids, Bay City, Pontiac and Port Huron, Mich.; Kansas City will have a 1 to 2c advantage over Minneapolis to Terre Haute, and Evansville, Ind., and Louisville, Ky.

Traffic League Demands Long-Short Haul Law Repeal

Resolutions adopted by nearly 1,000 delegates at the annual two-day meeting of the National Industrial Traffic League (the nation's largest organization of shippers) held at the Palmer House, Chicago, Nov. 18 and 19, vigorously pleaded for passage of the Pettengill bill to repeal the long and short haul restrictions in the present Interstate Commerce Act. (The long and short haul clause prevents railroads from charging less for a long haul than for a short haul over the same route, and restricts railroad competition with water carriers between coast points.)

The League opposed the McCarran train length bill and other "make work" legislation that affects the railroads, and expressed disapproval of President Roosevelt's governmental reorganization proposal.

Railroad and motor truck carriers were sharply criticized for failing to make savings to shippers when Congress gave them the Motor Carrier Act.

"The trucks and railroads assured Congress at the time the law was passed that they would give the public the benefit of the inherent advantages and economies of highway transportation," declared a report before the League, "but seemingly they have forgotten this assurance, because they are now working to restore the rates, rules, and regulations to the rail bases which prevailed prior to the advent of motor transportation."

A special com'te was appointed to file a complaint with the Interstate Commerce Commission, should it become necessary to secure "corrections." The report called upon the Commission for strict enforcement of the Act, charging that both its letter and spirit are being ignored.

William M. Jeffers, president of the Union Pacific railroad, made an earnest plea in his banquet speech for higher freight and passenger rates, declaring that railroads are being "squeezed" between an inability to adjust rates upward, and increased operating costs resulting from wage increases and increased material prices.

But in its resolutions the League declined to "participate actively" either for or against the campaign of the railroads for higher rates. The resolution admitted, however, that "the League is of the opinion that the carriers are seriously in need of increased revenues."

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Grain & Feed Journals

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Feedstuffs

San Francisco, Cal.—The annual convention of the California Hay, Grain & Feed Dealers Ass'n will be held here during the 1939 Golden Gate International Exposition.

Chicago, Ill.—Co-Pro-Co Chips is the name of a new all corn, cooked cereal dog and fox food ingredient containing dextrose, maltose and vitamins A and B, being marketed by the Corn Products Sales Co.

Portland, Ore.—At their regular monthly meeting this month the board of governors of the Oregon Feed Dealers Ass'n adopted a recommendation that members do not buy feed concentrates unless tagged and registered in accordance with Oregon laws.

The minimum phosphorus intake which permits normal growth and development of New Hampshire pure-bred pigs, says a technical bulletin of the Kansas Experiment Station, giving the results of three experiments, lies between .27 and .3 per cent of the ration.

Washington, D. C.—Distillers dried grain production during October was about 12,200 tons compared with 22,400 tons last year. Production July through October totaled only 46,400 tons, compared with 84,700 tons a year ago. Many plants were still closed at the end of October.—Buro of Agricultural Economics.

Washington, D. C.—Alfalfa meal production during October of 27,400 tons was 1,750 tons smaller than the September output but materially larger than the October output of recent years. Production, June through October, aggregated 145,600 tons compared with 136,500 tons a year earlier.—Buro of Agricultural Economics.

Grays Harbor, Wash.—The Modesto Plan of the California Hay, Grain & Feed Dealers Ass'n for maintenance of retail prices and terms for feedstuffs has been started among the feed men of the Grays Harbor District, under the sponsorship of the Trade Practices Com'te of the Pacific Northwest Feed Ass'n. If successful, the plan is expected to be extended to other districts.

Washington, D. C.—Brewers dried grains output during October totaled 7,700 tons, far below the output of 10,000 tons in September, 11,100 tons in August and 13,500 tons in July. The decline was largely seasonal with output during October only 400 tons smaller than a year ago. Production, July through October, aggregated 42,300 tons against 41,300 tons a year back.—Buro of Agricultural Economics.

San Francisco, Cal.—California beet sugar firms have agreed with the California Hay, Grain & Feed Ass'n to report the names and addresses of all farmers to whom they sell any quantity of beet pulp. Beet pulp sold to beet-growing farmers is sold with the understanding that it is for personal use, and not for re-sale. Farmers reselling the pulp are cut off the list, a policy that has maintained the beet pulp business for California dealers.

At the Dallas convention of the Grain & Feed Dealers National Ass'n last month the feed distributors group decided to maintain the quiescent National Federation of Feed Ass'ns, and the National Feed Distributors Ass'n, also quiescent, both of which have comfortable balances in the bank, to become active only in case of need, such as another N.R.A., tho it is expected that the Grain & Feed Dealers National Ass'n will actively general the feed men in such event.

A Calcium Deficiency Cure

A cow fed a commercial dairy ration, composed mostly of corn, wheat, oats and soybeans, along with red clover hay for the first month after calving and subsequently blue grass pasture instead of hay, developed a decided disturbance in locomotion and presented a general emaciated and gaunt appearance, with dry bleached skin and rough hair.

The milk flow practically ceased and the animal failed to breed. The condition was overcome by the daily administration of 2 ounces calcium carbonate and 6 grains potassium iodide, according to C. C. Hastings.

Cows Need Protein Says Iowan

Ground feeds are from 10 to 25 per cent more efficient than ear corn for cows producing milk, claims Arthur R. Porter at Iowa State College.

Feeding broken ear corn to cows, or turning them into a corn-stalk pasture to forage, may save labor, but causes reduced milk production. Corn and stalks are too low in protein to satisfy a milking cow.

Mr. Porter suggests equal amounts of ground ear corn and ground oats, plus a high protein vegetable concentrate like soybean or linseed meal, and plenty of alfalfa, or silage for roughage.

Feed Men Discuss Trade Practices and Credits

The second monthly meeting of the newly re-organized Northwest Feed Manufacturers and Distributors Ass'n was held in the Curtis Hotel, Minneapolis, Tuesday night, Nov. 16.

PRES. CHAS. McCARTNEY called the meeting to order.

SEC'Y STAN OSGOOD told of what is being done to insure closer co-operation between the ass'n and the ass'ns representing the retailers.

RALPH M. FIELD, Chicago, pres. American Feed Mfrs. Ass'n, outlined briefly what his ass'n is doing to promote better trade practices and a sane credit policy, saying: "In order to prevent the development of tendencies which might later prove costly as well as disastrous, the executive com'te of the national ass'n appointed com'tes of seven, representing every section of the country, to contact manufacturers in each section. These com'tes are to reflect the ideas of the trade to the national ass'n, so that workable, uniform and practically flexible policies concerning trade practices and the granting of credit could be kept alive."

H. H. HUMPHREY, Wausau, Wis., Northwest member of the trade practice committee, outlined what his committee is doing and urged the co-operation of all.

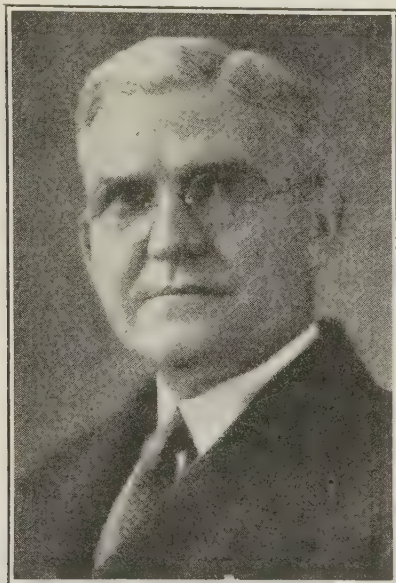
CHAS. VAN HORSSSEN, Minneapolis, Northwest member of the credit committee, urged the co-operation of those present in the filling out and early return of a questionnaire which the committee had recently mailed, having to do with the compilation of data and information which would enable the com'te to formulate a real and workable credit policy.

W. A. HALL, Memphis, former pres. Southern Mixed Feed Mfrs. Ass'n, explained the Robinson-Patman clause in the uniform contract used by the members of that ass'n.

Many of those present expressed their opinion of the booking period, premiums, etc.

Dale W. McMillen Honored

A distinguished gathering of notables in the grain and feed industry and business, financial, and agricultural leaders, met at Decatur, Ind., November 15 to celebrate "McMillen Day" and pay tribute to D. W. McMillen, founder and head of McMillen Industries: Central Sugar Co., Inc., Central Soya Co., Inc., and McMillen Feed Mills,



D. W. McMillen, Fort Wayne and Decatur, Ind., Honored at "McMillen Day."

Inc., for his contribution to business, agriculture, and the community.

The day was sponsored by the Decatur Chamber of Commerce and officers and employees of the McMillen companies, who acted as hosts.

Special cars on the Manhattan Limited from Chicago were met at Fort Wayne, and the guests driven to Decatur where they visited the sugar refinery, feed plant, soya bean expeller plant and inspected Central Soya Company's new Hansa-Muhle soya bean extraction plant, the only one operating in this country.

The party was then taken to Fort Wayne where they were entertained at a pre-dinner reception in the Chatterbox Room of the Hotel Anthony.

The Banquet held in the Catholic Community Center was attended by 750. Speakers included Gov. M. Clifford Townsend of Indiana; Mayor A. R. Holthouse, Decatur; Mark A. Brown, vice-pres., Harris Trust Co., Chicago; Samuel Jackson, Fort Wayne attorney; James E. Larrowe, Detroit; J. C. White, Chicago, vice-pres., Pennsylvania R.R.; Ralph Budd, Chicago, Pres., C.B.&Q. R.R.; Chas. E. Denney, Cleveland, pres., Erie R.R.; and the guest of honor, D. W. McMillen.

Feed Fiber Limit in North Carolina

A four hour meeting of farmers, feed manufacturers and technical experts with the North Carolina Department of Agriculture during the state's fair last month resulted in an agreement to limit the amount of crude fiber admissible in dairy and poultry feeds.

The meeting voted to name a com'tee of one member each from the state poultry ass'n, state dairy ass'n, State College Extension Service, American Feed Manufacturers Ass'n, state feed manufacturers ass'n, and the state department of agriculture, to confer and recommend to the North Carolina Board of Agriculture the percentage of crude fiber allowable in dairy and poultry feeds.

Feedstuffs Definitions Accepted by Feed Officials

Feed and feed ingredient manufacturers were well represented at the 29th annual convention of the Ass'n of American Feed Control Officials, Inc., at the Raleigh Hotel, Washington, D. C., Nov. 4 and 5, where healthy discussion of feed questions brought better understandings of each other's problems to both the manufacturers and the full attendance of officials.

Officers elected by the organization at the close of the two day convention placed for the ensuing year: G. H. Marsh, Montgomery, Ala., pres.; L. M. Jeffers, Sacramento, Cal., vice pres.; H. H. Hanson, Dover, Del., and C. S. Ladd members of the executive committee. L. E. Bopst, College Park, Md., was re-elected sec'y-treas.

SEC'Y BOPST, in his annual report at the opening session, showed the affairs of the ass'n to be in good order, and that the organization has rapidly gained influence.

L. S. WALKER, Burlington, Vt., retiring pres., emphasized the need for uniform laws and practices in his annual report.

E. S. SAVAGE, Cornell University, Ithaca, N. Y., reviewed educational work on feeds, with particular reference to the recent 2-day school for feed manufacturers conducted by Cornell.

JAMES W. KELLOGG, of the Dog Food Division of the Institute of American Meat Packers, described a program inaugurated by his organization to cooperate with control officials.

H. R. KRAYBILL, Purdue University, LaFayette, Ind., showed charts and statistics in a technical address on "The Relation of Hominy Feed to the Production of Soft Pork."

IMPORTANT business of the convention, the report of the executive com'tee on definitions of feeding-stuffs and ingredients, was conducted on the second day. This report, as adopted by the ass'n, included the following action:

The definition for chopped alfalfa was changed to read "chopped or cut alfalfa."

The former official 1932 definition of cod liver oil was deleted to read: "Cod liver oil is the oil obtained from the livers of *gadus morrhuae* and/or other species of the family *gadidae*. It must contain not less than 600 U.S.P. units of vitamin A and not less than 85 Association of Official Agricultural Chemists' chick units of vitamin D per gram."

The tentative definition of iodized salt was made official. It reads: "Iodized salt is common salt (NaCl) containing not less than 0.015% of iodine, uniformly distributed."

Adopted as tentative, with notice that it will be made official next year, was the following definition of anti-rachitic oil: "Anti-rachitic oil is an oil recognized as a satisfactory source of vitamin D obtained from fish or parts thereof. This term will be recognized only in the declaration of ingredients in a proprietary feed. The name of the specific oil may be used in lieu of this name if desired."

Rice polishings were officially defined as: "Rice polishings is a by-product of rice obtained in the milling operation of brushing the grain to furbish the kernel."

Former definitions for distillers' corn dry grains and distillers' rye dry grains were replaced with new official definitions as follows:

"Corn distillers' dried grains is the dried residue obtained in the manufacture of alcohol and distilled liquors from corn or a grain mixture in which corn predominates."

"Rye distillers' dried grains is the dried residue obtained in the manufacture of alcohol and distilled liquors from rye or a grain mixture in which rye predominates."

Officials decided that the same crude fiber standards apply to wheat and rye products with screenings as without screenings.

In the tentative definitions for beet and cane molasses, the percentage of total sugars was changed from 51% to 48%. The percentage of ash to specific gravity was eliminated from both, and an added requirement was inserted that the product contain not more than 27% moisture

Imports and Exports of Feeds

Imports and exports of feedstuffs during September and during the nine months ending September compared with the like periods of 1936, as reported by the Bureau of Foreign and Domestic Commerce, were as follows, in tons of 2,240 lbs. except where noted otherwise:

	IMPORTS		9 Months ended Sept.	
	September 1937	1936	1937	1936
Hay*	1,137	13,291	138,933	26,640
Coconut cake†	11,285,865	6,346,574	125,814,869	70,811,155
Soybean cake†	2,876,127	4,153,791	101,138,273	32,394,668
Cottonseed cake†	490,000	3,937,935	37,117,312	10,509,313
Linseed cake†	250,000	5,801,700	23,495,261	29,313,196
All other cake†	407,100	1,904,126	46,974,901	5,852,899
Wheat fds.*	12,113	29,927	289,816	243,945
Beet pulp*	280	3,138	33,560	18,358
Tankage	5,158	4,800	37,988	38,086
Fish scrap	3,674	4,832	52,322	31,164
EXPORTS				
Hay	62	97	2,642	1,918
Cottons'd cake	5,495	...	5,501	1,957
Linseed cake	22,359	14,200	217,882	121,181
Other oil cake	568	200	1,314	17,553
Cottons'd meal	2,653	490	4,009	2,380
Linseed meal	2,456	345	14,376	5,366
Other oil cake meal	1,661	876	7,461	23,704
Fish meal	6	283	188	3,424
Mxd. dairy fds.	172	101	1,298	1,156
Mxd. poultry fds.	70	154	1,148	1,395
Oyster shells	5,248	7,480	38,148	42,236
Other prepared and mixed fds.	388	295	1,374	1,505
Other feed, bran	763	868	4,214	7,286
Kafir, milo, bus.	1,554	1,358
*2,000-lb. tons. †Pounds.				

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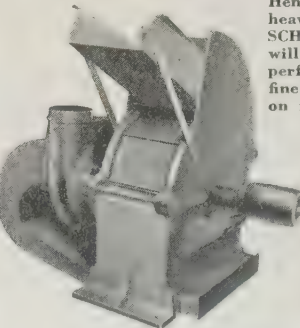
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Poultry Feeds and Feeding

Chicks receiving insufficient vitamin D will consume more calcium carbonate grit than will those having access to direct sunshine, or ample vitamin D in cod liver or other vitamin D oils, according to experiences at the Wisconsin Experiment station.

Excessive mineral additions to the diets of growing chicks, throwing out of balance the calcium-phosphorous ratio, may be detrimental to the birds, making them more susceptible to coccidiosis germs, according to trials reported by Herrick, Ott, Halpin, and Holmes in 1935.

Corvallis, Ore.—Seventy per cent of Oregon-grown turkeys are shipped to out-state markets. Oregon will market 700,000 pounds of turkeys as compared with 800,000 pounds last year. It requires an average of seventy-five pounds of feed to produce a turkey ready for market at twenty-six weeks of age.—F. K. H.

Turkey Flavors

H. E. Crosby and F. L. Knowlton, investigating flavors in turkey meats caused by feeding in experiments at Oregon State College, have summarized their findings as follows:

Liberal feeding of green alfalfa without fish meal and without vitamin D fish oil produced no off flavor or body discoloration in six turkeys thus fed. (Lot 2).

Green alfalfa fed ad libitum in addition to an all-mash ration containing 10% of imported foreign fish meal produced no off flavor or discoloration in any of six birds. (Lot 3).

Feeding low grade, foreign fish meal at a level of 10% in an all-mash ration without vitamin D fish oil or succulent green feed did not produce in any of the six birds thus fed any fishy odors or off flavors. (Lot 4).

The addition of 1% low quality vitamin D oil (non-destearinated, maximum of 1% free fatty acid and not U. S. P. standard because of off color and off flavor) to the all-mash containing 10% of low grade, foreign fish meal produced some fishy odors and flavors. One of the two birds (No. 2049) starved but not pre-cooked for 27 hours had a fishy odor while cooking; the dark meat was objectionably fishy; the giblets were too odoriferous to use and the skin was very fishy.

In three feeding tests some off-flavored turkeys have been produced on the following diets:

Test No. 1: With 20% high grade fish meal in a mash to which was added 2% of a fish oil (not U. S. P.) and the turkeys given free choice of mash and grain.

Test No. 2: With 10% high grade fish meal in an all-mash ration to which was added one-half of one per cent of an U. S. P. vitamin D oil.

With 10% high grade fish meal in an all-mash ration to which was added 1% of an U. S. P. vitamin D oil.

With a mash containing neither fish meal nor vitamin D oil, but where turkeys had free access to grain which had 2% U. S. P. vitamin D oil mixed in it.

Test No. 3: With an all-mash ration containing 10% foreign fish meal to which was added 1% off-odor, off-color, not U. S. P. vitamin D oil.

With an all-mash ration containing 10% foreign fish meal to which was added 2% off-odor, off-color, not U. S. P. vitamin D oil.

No fishy or off-flavored turkeys have been produced under the following feeding conditions:

Test No. 1: With a mash containing 20%

high grade fish meal but no vitamin D fish oil and allowing a free choice diet of mash and grain.

With a mash containing 20% grade fish meal to which was added one-fourth of one per cent of a highly concentrated vitamin D unit oil and birds given choice of grain or mash.

Test No. 2: With an all-mash ration containing 10% high grade fish meal.

With an all-mash containing 10% high grade fish meal to which was added one-eighth of 1% of another brand of highly concentrated vitamin D unit oil.

Test No. 3: With green feed fed abundantly, with and without low grade, foreign fish meal in an all-mash ration.

With low grade fish meal at a 10% level in an all-mash ration containing no vitamin D fish oil.

Combinations of fish oils and fish meals, further complicated by the grades and levels used, have produced some birds with off flavors which have damaged the reputations of all turkeys. Until the complete and final answer has been found regarding the cause of fishy flavored turkeys, it is recommended that the use of fish meals and fish oils be discontinued in the turkey's diet eight weeks prior to slaughter.

Form of Vitamin D Affects Hatchability

By J. B. SMITH and H. D. BRANION, Ontario Agricultural College

The influence of vitamin D in the forms of fortified cod liver oil, cod liver oil, irradiated cholesterol and pilchard oil, fed at four levels, each, using an "all-milk" ration was studied.

About 35 International units per 100 grams

Feed Prices

The following table shows the closing bid price each week for January futures of standard bran and gray shorts, spot cottonseed meal, soybean oil meal, and No. 1 fine ground alfalfa meal, in dollars per ton and No. 2 yellow corn and No. 2 yellow soybeans in cents per bushel:

	Minneapolis		Kansas City	
	Bran	Midds.	Bran	Shorts
Aug. 14.....	19.50	22.00	17.50	19.00
Aug. 28.....	17.00	17.25	16.65	19.00
Sept. 4.....	17.00	17.00	16.25	19.35
Sept. 18.....	19.00	21.00	17.75	20.00
Oct. 2.....	19.00	21.00	17.65	20.00
Oct. 9.....	18.00	20.50	17.50	19.50
Oct. 16.....	19.00	21.50	18.35	20.00
Oct. 23.....	20.00	20.00	18.60	20.00
Oct. 30.....	19.00	19.00	18.25	19.25
Nov. 6.....	19.25	19.00	18.00	18.70
Nov. 13.....	21.00	21.00	19.00	19.25
Nov. 20.....	20.50	20.50	18.40	19.60

	St. Louis		Chicago	
	Bran	Shorts	Soybeans	Meal
Aug. 14.....	19.65	21.00	No sales	34.00
Aug. 28.....	18.75	20.75	No sales	33.00
Sept. 4.....	18.50	20.85	No sales	31.00
Sept. 18.....	19.95	21.85	No sales	34.20
Oct. 2.....	19.70	22.00	No sales	28.00
Oct. 9.....	19.30	20.75	.95	29.20
Oct. 16.....	20.60	21.60	.97	27.70
Oct. 23.....	20.75	21.50	.995%	29.20
Oct. 30.....	20.30	21.00	.933%	28.70
Nov. 6.....	20.15	20.50	.921%	29.70
Nov. 13.....	21.15	21.50	.93	29.70
Nov. 20.....	20.50	21.60	.93	29.50

	Cottonseed Meal		Kansas City		Chicago	
	Ft. Worth	Memphis	Alfalfa	Corn	Corn	Corn
Aug. 14.....	33.00	25.50	22.50	105	105	105
Aug. 28.....	26.00	19.85	22.00	99½	99½	99½
Sept. 4.....	23.00	20.80	21.50	103½	103½	103½
Sept. 18.....	23.00	20.75	21.50	106½	106½	106½
Oct. 2.....	23.00	21.75	21.50	90	90	90
Oct. 9.....	24.00	20.75	22.50	68	68	68
Oct. 16.....	26.00	22.00	22.00	66	66	66
Oct. 23.....	25.00	22.50	22.00	63	63	63
Oct. 30.....	26.00	22.60	22.00	61	61	61
Nov. 6.....	25.50	22.50	21.50	56	56	56
Nov. 13.....	25.50	23.00	21.50	54½	54½	54½
Nov. 20.....	26.00	23.00	21.50	56	56	56

of ration of vitamin D in the form of cod liver oil and fortified cod liver oil gave good results, but 70 units appeared to be more profitable. The birds had access to sunshine on suitable days, although the amount of sunshine available was low.

The vitamin D furnished by irradiated cholesterol was not as efficient as that furnished by the cod liver oil. Pilchard oil failed to promote satisfactory hatchability when fed at levels equivalent to the cod liver oil in weight. Irradiated ergosterol was inefficient. The vitamin D requirement for egg production is not as high as that for hatchability.

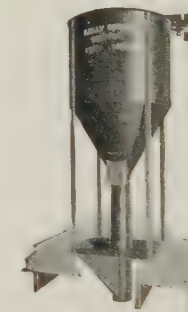
The occurrence of certain types of monsters and chondrodystrophy, oedema, and ectopia was in reverse proportion to the effectiveness of the vitamin supplement, both in kind and amount. Ninety-five units of irradiated cholesterol per 100 grams ration appeared to be as efficient as similar amounts of cod liver oil under indoor conditions.

Considering all factors, fortified cod liver oil is slightly more efficient on a unit basis than the other supplements. A high level of this oil tended to depress egg production lower than high levels of intake of the other supplements.

Washington, D. C.—Wheat stocks held by 745 mills on Sept. 30 this year totaled 163,363,259 bus., compared with 153,521,071 bus. held by 721 mills on the same date last year.—Department of Commerce.

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by Lippincott and Card
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Grain & Feed Journals

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Oats in Diet Reduce Cannibalism

Oats, fed as the sole cereal in a ration for growing and laying pullets, consistently and significantly reduced cannibalism below that experienced on rations containing corn as the sole cereal, according to four trials with single comb White Leghorns, conducted in four different years with different lots of feed each year, at the Western Washington Experiment Station, as reported by M. Wayne Miller and Gordon E. Bearse.

Said the authors: "The results of these trials suggest the possibility that cannibalism is a result of an unsatisfied appetite which in turn is caused by a deficiency of some nutrient."

The reason for the experiment was the prevalent belief among Washington poultrymen that domestic yellow corn would increase the cases of prolapsus of the oviduct and this in turn led to the belief that cases of mortality from "pickouts" were caused by the prolapsus.

Altho different rations were used each year, in each of the four lots wheat or corn, or oats, or barley was fed as the sole cereal.

In every case the corn-fed birds during the late part of the growing period, developed severe cannibalistic habits, starting with feather picking, and in the two years for which complete laying house records were kept, the mortality from this cause was severe.

In contrast, very little picking of any kind developed among the oat-fed birds. Intermediate degrees of cannibalism occurred in the control ration, the wheat, and the barley fed birds in the years these rations were fed.

The feathering of the oat-fed birds was most abundant; feathers on the corn-fed birds were of a creamy color and oily appearance.

Perosis developed in the corn pens in each of the last three years of the trials, showing also, to a minor extent, in the barley pens. This led to an examination of the grains used in the last trial for manganese content, it being known that manganese is effective in preventing perosis. The manganese contents in milligrams per 100 grams of grain were found to be: oats 4.66, wheat 2.91, barley 1.19, corn 0.38.

"This difference in manganese content indicates that manganese could be responsible for the prevention of perosis in the birds in the oat and wheat pens," admit the authors, but hesitant to jump at conclusions, they hasten to add: "Further work is in progress to determine whether manganese or other nutritional factors are responsible for the cannibalism preventing properties of oats inasmuch as the oats analyzed highest in manganese and the corn lowest."

The success of oats in these trials in preventing perosis and cannibalism is no recommendation of oats as an ideal growing ration grain, unaided by other grains and feed ingredients. The authors point out "that oats caused considerable difficulty with gizzard impactions in the young chicks and that there seemed to be a greater tendency for pendulous crops to develop, particularly in the last trial. It is also true that from the standpoint of feed efficiency the oat-fed birds were poorest. Initial egg weight was somewhat larger in the oat birds, doubtless the result of slower maturity and greater body weight."

The growth value of the four grains tested, as determined at eight weeks, showed oats first in every comparison, followed in order by corn, wheat, and barley. The body weight of the birds when they laid their first eggs was in the same order, but the corn-fed birds were heaviest at 24 weeks of age.

Dues of \$4,095 for the year 1934 must be paid by the Nebraska Farmers Union to the National Union, the Supreme Court of Nebraska having reversed the decision of the lower court last month. The state union had refused to pay the dues of 25 cents per member as long as Edward Kennedy remained national secretary.

Coarse vs. Fine Mash

By D. C. KENNARD, Ohio Agricultural Experiment Station, Wooster, O.

That chickens prefer coarse to finely ground feed is well known but it is not generally known how feed consumption and egg production may be affected by a coarse or a finely ground mash. Perhaps this is one of the reasons for the customary practice of finely grinding mash feeds for poultry. We know of no evidence to indicate any advantage of finely ground feeds for poultry insofar as availability of nutrients or efficiency of digestion is concerned.

Advantages generally attributed to fine ground mashes are: Better appearance; less picking over and wastage; preferred by many poultrymen.

Advantages of coarse, granular mash are: More palatable; better feed consumption; increased egg production; less subject to deterioration; costs less for grinding.

In a recent palatability test conducted by

the Nebraska Experiment station, 200 Leghorn layers consumed 270 pounds of a coarsely ground mash, 175 pounds medium ground, and 115 pounds finely ground. The birds had free and equal access to the three mashes which were the same except for the size of particles. The mash was composed of:

Yellow cornmeal, 31%; shorts, 20%; bran, 10%; pulverized oats or barley, 10%; alfalfa meal (No. 1 quality), 10%; meat scraps, 5%; fish meal, 5%; soybean oil meal, 5%; pulverized limestone, 2%; fine salt, 1%; cod-liver oil, 1%.

The coarsely ground mash was composed of corn which was passed through a 1/8-inch hammer mill screen with the other ingredients just as available on the market without re-grinding. The medium-ground mash was the same as the coarse except for passing thru a 1/16-inch screen, and the fine was that which passed thru a 1/32-inch screen.

Obviously, it was the coarsely ground corn, alfalfa, and bran which determined the increased palatability of the coarse mash.



90 lbs. of Cod

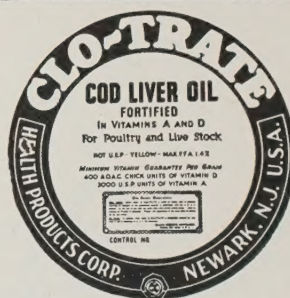
That's a lot of weight for a single cod. Though size is important to the fisherman, it is no indication of the vitamin content of the oil when rendered. And, after all, what interests you is the number of available units of vitamins A and D, which are so essential to the health and bone development of your customers' flocks.

Because of the wide variation in the vitamin content of raw cod liver oil, feed manufacturers should choose an oil supplement which they know has been scientifically fortified into a standardized product of known vitamin content.

CLO-TRATE is such a product. It is a dependable source of both vitamins A and D. CLO-TRATE is produced under superior conditions in one of the largest and most modernly equipped plants in the world. It is guaranteed to contain not less than 3000 U.S.P. units of vitamin A and 400 A.O.A.C. chick units (equivalent to at least 400 U.S.P. units) of vitamin D per gram.

Be sure your feeds are adequately fortified with vitamins A and D by using CLO-TRATE in all your feeds.

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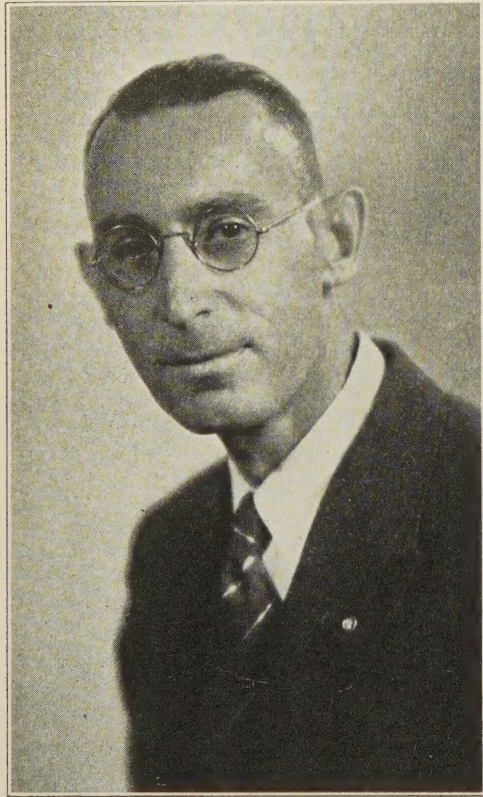
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I. R. James, Marion, O.

ledo, and two years in the hay and grain business in Toledo.

Mr. James was born in Jackson County, Ohio, graduating from high school in 1916. He had one year at the Rio Grande College. When the United States entered the war, he enlisted in the air corps of the United States regular army, receiving his training at the Fort Omaha air school in February, 1918. He served in the A. E. F., taking part in four major battles on two sections, the St. Mihiel and Argonne-Meuse.

Alfalfa Meal Has Vitamin A

Growing chickens need vitamin A to grow. Birds ranging about the farm during the growing season usually pick up sufficient quantities of green feed, but confined birds, unable to get green feed, should have some feed that is rich in vitamin A, say poultry specialists.

Alfalfa leaf meal is an economical source of vitamin A, when all feeds must be purchased, and may serve as the sole source of this vitamin for growing chicks. Other common sources, in addition to green feeds, are yellow corn and milk.

The percentage of alfalfa-leaf meal required in a diet, which contains no appreciable quantity of vitamin A from other sources, depends on the ability of that diet to support growth when vitamin A is adequately supplied, and on the vitamin A potency of the alfalfa-leaf meal itself. This potency is influenced by the method of preparation, variety, soil, weather, and cutting. Of these, the first is the most important.

The best criteria of an alfalfa-leaf meal's vitamin A potency are: Age, color, and "brightness." Unfortunately, it is seldom pos-

sible for the purchaser to ascertain the age of the meal he buys. Altho the color of an alfalfa-leaf meal is a fairly good index of the meal's vitamin A content, potency decreases more rapidly than the greenness of the meal changes.

As little alfalfa-leaf meal as 1.5 per cent of the total ration may supply an adequate quantity of vitamin A to maintain chicks in good health and enable them to grow, but it is unwise to depend on less than 5 per cent of an alfalfa-leaf meal of unknown potency.

Making Hay by Machine

The artificial drying of hay is done by passing the heated air or hot furnace gases thru the forage on an endless apron conveyor or in a revolving drum. The air in the apron conveyor drier is heated to 250° to 350° and to much higher temperatures in the drum driers. Chopping, shredding, or crushing the green forage hastens the drying operation.

The rate at which a drier of a given size will dry hay depends on the moisture content of the hay when it enters the drier. For this reason the capacity is usually stated in terms of the number of pounds of water evaporated per hour. Driers may be obtained with capacities ranging from approximately 1,000 to 6,000 pounds of water per hour.

The overhead cost of a drier is an important consideration. If a \$6,000 drier is used to dry 100 tons of hay a year the overhead cost would be \$10.80 per ton, whereas if 1,000 tons of hay are dried the overhead cost per ton would be only \$1.08. The cost of drying hay artificially is likely to be prohibitive unless a large quantity is dried, according to the Bureau of Agricultural Engineering.

Protein Supplements in Feeds

By PAUL GERLAUGH of Ohio Agri. Exp. Sta.

Hogs and poultry are not equipped to handle large quantities of roughage. Therefore, they cannot use legume hays as extensive sources of protein. Cattle and sheep are ruminants and carry a digestive apparatus designed to handle roughages. Mature or nearly mature cattle can handle roughages in large enough quantities that if the roughage is a nice quality legume, the protein supply would be sufficient for good production but not the best of which the animal is capable. The addition of protein concentrates to rations containing good hay depends upon relative prices of livestock, feeds and milk products. If the roughage is non-leguminous, the addition of protein concentrates would certainly be well justified. Young animals in the feed lot need protein supplement added if they are to make a rapid finish.

Sheep are our best roughage handlers. Sheepmen with a good supply of legume hay are almost immune from protein problems. But if their hay is non-leguminous, the addition of proteins is justified and quite essential if speedy gains are wanted.

Our work with supplements certainly indicates that the generous use of protein supplements makes for faster gains and, therefore, an earlier marketing date.

The roughage supply, the protein concentrate supply, the corn supply, the numbers of livestock, and the resultant market price levels all seem to point in the direction that indicates that this is a good year to be generous with the amount of protein supplement to use in our rations.

Removing Vitamin A Suppressing Force in Soybeans

Experiments at Purdue have shown that soybeans, when fed in rations to dairy cows, interfere with the transference of the vitamin A potency of the ration to the milk fat secreted by the cows. A recent series of experiments has shown this factor to be associated with both the soybean oil meal and soybean oil produced either by the expeller or solvent processes.

The factor seemed to be highly concentrated in the oil and some preliminary studies have been conducted in an attempt to remove it from the soybean oil. A sample of crude soybean oil was treated with activated carbon and another sample of oil treated with a synthetic sodium aluminum silicate. These treated oils were then fed to dairy cows and studies made of their effect on the carotene content and vitamin A activity of the milk fat secreted by cows.

The results of this preliminary trial indicate that activated carbon removed a good portion of the vitamin A suppressing factor in soybean oil, while the other adsorbent was without effect.

Indianapolis, Ind.—Farm leaders and others met Nov. 8 at the call of Governor M. Clifford Townsend to discuss a "permanent" agricultural program.

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Sales, Shipments and Returns. Is designed to save time and prevent errors. The pages are used double; left hand pages are ruled for information regarding "Sales" and "Shipments"; right hand page for "Returns". Column headings provide spaces for complete records of each transaction, one line. Book contains 80 double pages of ledger paper, size 10½x16 inches, with 3-page index. Spaces for recording 2,200 cars. Bound in heavy canvas with keratol corners. Weight, 3½ lbs. Order Form 14AA. Price \$3.25, plus postage.

Grain Shipping Ledger for keeping a complete record of 4,000 carloads. Facing pages are given to each firm to whom you ship and account is indexed. Book contains 80 double pages of ledger paper with 16-page index, size 10½x15½ inches, well bound with black cloth covers and keratol back and corners. Weight, 4 lbs. Order Form 24. Price, \$3.50, plus postage.

Shippers Record Book is designed to save labor in handling grain shipping accounts and gives a complete record of each car shipped. Its 80 double pages of ledger paper, size 9½x12 inches, provide spaces for 2,320 carloads. Wide columns provide for the complete record of all important facts of each shipment. Bound in heavy black cloth with keratol back and corners. Shipping weight, 2½ lbs. Order Form 20. Price \$2.50, plus postage.

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Grain Receiving Register for recording loads of grain received from farmers. It contains 200 pages of ledger paper 8½x13½ inches, capacity for 8,200 loads. Some enter loads as received, others assign a page to each farmer, while others assign sections to different grains. Bound in strong board covers, canvas back. Headings of columns are: "Date, Name, Kind of Grain, Gross, Tare, Net, Bushels, Pounds, Price, Amount, Remarks." Weight, 2½ lbs. Order Form 12AA. Price \$2.50, plus postage.

Wagon Loads Received has columns headed: "Month, Day, Name, Kind, Gross and Tare, Net Pounds, Bushels, Pounds, Price, Dollars and Cents, Remarks." Contains 200 pages of ledger paper size 9½x12 inches, providing spaces for 4,000 loads. Bound in heavy boards with strong cloth covers and keratol corners and back. Weight, 2 lbs. Order Form 380. Price \$2.50, plus postage.

Receiving and Stock Book is arranged to keep each kind of grain in separate column so each day's receipts may be easily totaled. It contains 200 pages linen ledger paper size 9½x12 inches, ruled for records of 4,000 loads. Well bound in black cloth and keratol back and corners. Shipping weight, 2½ lbs. Order Form 321. Price \$2.50, plus postage.

Grain Receiving Ledger has 200 pages linen ledger paper and 28-page index, 8½x13½ inches, numbered and ruled for 44 entries. Well bound in pebble cloth with keratol back and corners. Weight, 3 lbs. Order Form 43. Price, \$3.00, plus postage.

Form 43 XX contains 428 pages. Shipping weight 4½ lbs. Price \$5.00, plus postage.

Grain Scale Book is designed to assign separate pages to each farmer and their names can be indexed so their accounts can be quickly located. It contains 252 numbered pages and 28-page index, of high grade linen ledger paper 10½x15½ inches. Each page will accommodate 41 wagonloads. Well bound with heavy board covers with cloth sides and keratol back and corners. Weight, 4½ lbs. Order Form 23. Price, \$4.00, plus postage.

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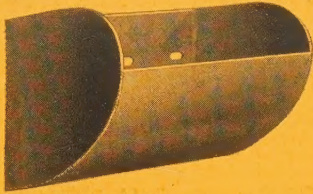


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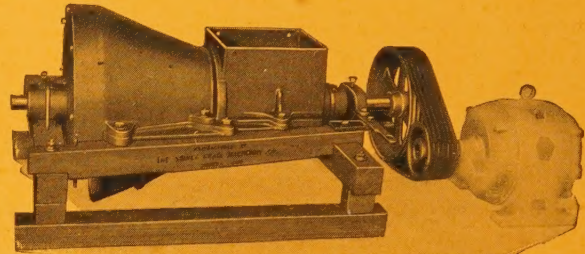
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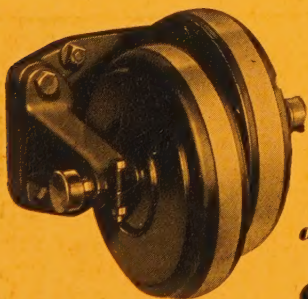
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